TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

No. 94.

ROBERT WERNER, APPELLANT,

vs.

GEORGE E. KING.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK.

FILED AUGUST 17, 1875.

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1 The President of the United States of America to Robert Werner, greeting:

You are hereby commanded that you personally appear before the judges of the circuit court of the United States of America for the southern district of New York, in the second circuit court, in equity, on the first Monday of December, A. D. 1871, wherever the said court shall then be, to answer a bill of complaint exhibited against you in the said court by George E. King, and to do further and receive what the said court shall have considered in that behalf. And this you are not to omit under the penalty on you of two hundred and fifty dollars.

Witness the Hon. Salmon P. Chase, Chief-Justice of the Supreme Court of the United States, at the city of New York, on the 24th day of October, in the year one thousand eight hundred and seventy-one, and of the Independence of the United States of America the ninety-sixth.

KENNETH G. WHITE, *Clerk.*

M. A. KURSHEEDT, *Compl't's Sol'r.*

The defendant is required to enter appearance in the above cause in the clerk's office of this court, on or before the first Monday of December, 1871, or the bill will be taken pro confesso against him.

K. G. W., *Clerk.*

2 SOUTHERN DISTRICT OF NEW YORK, *ss:*

Frank A. de Fontaine, being duly sworn, doth depose and say that on the 24th day of October, 1871, he served the within subpœna on the defendant, Robert Werner, at No. 108 Chambers st., in the city of New York, by delivering to and leaving with him a copy thereof, and at the same time showing him this original, with the seal of the court attached.

F. A. DE FONTAINE.

Subscribed & sworn to before me this 27th day of October, 1871.

R. E. STILWELL,
U. S. Com.

(Indorsed:)

Served as per annexed affidavit.

GEO. H. SHARPE,
U. S. Marshal.

DEC. 4, '71.

I hereby depute F. A. de Fontaine to serve the within writ.

GEO. H. SHARPE,
U. S. Marshal.

OCT. 24, 1871.

3 In the circuit court of the United States for the southern district of New York, in the second circuit. In equity.

To the honorable the judges of the circuit court of the United States for the southern district of New York, in the second circuit:

George E. King, of the city of New York, and a citizen of the State of New York, brings this his bill of complaint against Robert Werner, of Hoboken, and a citizen of the State of New Jersey.

And thereupon your orator complains and says that, on or before the

26th day of February, 1867, your orator, the said George E. King, was the first and original inventor and discoverer of certain new and useful improvements in fluting-machines, described in the letters-patent hereinafter mentioned, and which had not been known or used by others prior to his invention and discovery thereof, and which had not been at the time of his application for letters-patent therefor, as hereinafter mentioned, in public use or on sale with his consent and allow-
4 ance, contrary to the provisions of the acts of Congress of the United States, in such case made and provided.

And your orator further shows unto your honors that your orator, said George E. King, being so as aforesaid the first and original inventor and disoverer of said improvements in fluting-machines, and being a citizen of the United States, and being desirous to obtain an exclusive property in said invention or improvements within and for the United States, did on the 26th day of February, 1867, upon due application therefor, and having in all things complied with the conditions and requirements of the acts of Congress in such case made and provided, obtain letters-patent of the United States for said invention or improvements, in due form of law, under the seal of the Patent-Office, signed by the Secretary of the Interior, and countersigned by the Commissioner of Patents, bearing date the said 26th day of February, 1867, and being No. 62492, by which said letters-patent there was granted and secured, or intended to be granted and secured, to your orator, the said
5 George E. King, his heirs, administrators, or assigns, for the term of seventeen years from the said 26th day of February, 1867, the full and exclusive right and liberty of making, using, and vending to others to be used, the said invention or improvements described and set forth in said letters-patent, which said letters-patent are now remaining of record in the Patent-Office of the United States, and as by reference to which, or a duly-authenticated copy thereof, ready in court to be produced, if required, will more fully and at large appear; and by virtue whereof your said orator, George E. King, became, and was the sole owner of all the rights and privileges granted and secured, or intended to be granted and secured, in and by said letters-patent.

And your orator further shows unto your honors that your said orator, said George E. King, having for good and lawful cause, after the issuing of the said letters-patent as aforesaid, surrendered the same to the Commissioner of Patents, and having made due application therefor, and having in all things complied with the conditions and re-
6 quirements of the acts of Congress in such case made and provided, did, on the 23rd day of June, 1868, obtain new letters-patent, in two divisions, for the same invention, upon two amended specifications, for the residue of the term of seventeen years from the 26th day of February, 1867, which new letters-patent were issued in due form of law, under the seal of the Patent-Office of the United States, signed by the Secretary of the Interior, and countersigned by the Commissioner of Patents, bearing date the said 23rd day of June, 1868, and being re-issues Nos. 3000 and 3001, which said new and re-issued letters-patent are now remaining of record in the Patent-Office of the United States; and as by said last-mentioned letters patent, or a duly authenticated copy thereof, ready in court to be produced, if required, will fully and at large appear; one of said re-issues, No. 3000, being for the machine by which the article of fluting or puffing described in said patent is made, and the other of said re-issues, No. 3001, being for the article of fluting or puffing made as described in said patent.

And your orator further shows unto your honors that on or

7 about the 15th day of September, 1868, your orator, the said George E. King, filed his bill of complaint against Lehman H. Mandelbaum in the circuit court of the United States for the second circuit and southern district of New York, setting forth, among other things, the said letters-patent No. 62492, of the 26th day of February, 1867, and the said re-issued letters-patent Nos. 3000 & 3001, of the 23rd day of June, 1868, and the infringement of the aforesaid letters-patent by said defendant in said suit, Lehman H. Mandelbaum, and praying an injunction and account against him.

And the said defendant in said suit, Lehman H. Mandelbaum, filed his answer to the bill of complaint therein, denying, among other things, the validity of the said letters-patent, and set up the same thing had been known and used by various persons in this country long prior to the date of said patent; and issue being joined therein the parties proceeded to take proofs, which were taken at great length and for a long time.

8 And your orator further shows unto your honors that, the proofs in the said cause being taken, the cause was brought to a final hearing on its merits in the months of March and May, 1871, before the honorable Samuel Blatchford, judge, and was argued before him by the counsel of the respective parties, and was held under advisement by the said judge until the 9th day of June, 1871, when the judgment of the court was pronounced.

And the said court decided, among other things, that the said letters-patent were valid in law, and that your orator, the said George E. King, was the original and first inventor of the improvements patented as aforesaid, and referred to in said bill of complaint, and, by a decree pronounced in said cause, perpetually enjoined the said defendant in said suit, Lehman H. Mandelbaum, from making, constructing, using, and vending to others to be used, the said improvements patented as aforesaid, and ordered an account to be taken of the damages due by reason of the infringements already committed by the said defendant in said suit, Lehman H. Mandelbaum, as by reference to the record of the proceedings in said suit will more fully and at large appear.

9 And your orator further shows unto your honors that by virtue of the premises he became and now is the sole owner of the rights and privileges granted and secured, or intended to be granted and secured, in and by the said letters-patent before referred to and as above set forth, and is entitled to all damages occasioned by any infringements of said patents, or either of them, so as aforesaid granted to your orator on said 23rd day of June, 1868, and the invention described therein.

And your orator further shows unto your honors that since he so became the owner and holder as aforesaid of the said rights and privileges under the said letters-patent, your orator has put into practical use and operation the said inventions or discoveries, and he has made or caused to be made and sold large quantities of fluting or fluted puffing made according to such inventions; and he has invested large sums of money and been to great expense in and about such inventions, and for the purpose of putting the same into practical operation, and making the same profitable to your orator and useful to the public; and that

10 such inventions have been and are of great advantage to your orator and to the public, and that the public have generally acknowledged and acquiesced in the aforesaid rights of your orator, and your orator believes he will realize and receive large gains and profits therefrom if infringements by said defendant, Robert Werner and his confederates, shall be prevented.

Yet the said defendant, Robert Werner, well knowing the premises and the rights secured to your orator, as aforesaid, but contriving to injure your said orator, and to deprive your orator of the benefits and advantages which might and otherwise would accrue to him from said inventions, on or about the first day of January, 1871, after the issuing of the said letters-patent, re-issues Nos. 3000 and 3001, and at divers times since that time, and before the commencement of this suit, at the city of New York, and in the southern district of New York, did, as your orator is informed and believes, and without the license or allowance, and against the will of your orator, and in violation of his rights and in infringement of the aforesaid letters-patent, unlawfully and wrong-
11 fully, and in defiance of the rights of your orator, make, construct, put in operation, use, and sell machines for making fluted puffing, made according to or employing and containing and using said inventions and discoveries, or substantial or material parts thereof, described and patented in said letters-patent, and did make and sell fluted puffing, made according to said inventions and patents, all in defiance of the rights acquired by and vested in and secured to your orator, and to your orator's great and irreparable loss and injury, and by which your orator has been and still is being deprived of great gains and profits, which your orator might and otherwise would have obtained and received, but which have been received and enjoyed, and are being received and enjoyed, by the said defendants by and through his aforesaid unlawful acts and doings.

And your orator further shows unto your honors that the said defendant has derived and received from the aforesaid use of the said inventions large gains and profits, but what amount of such gains and profits have been so derived and received by said defendant your orator does not know and cannot set forth, but prays that the said
12 defendant may be required to make a discovery as to his use of said inventions, and of all gains and profits received by him therefrom or by means thereof.

And your orator further shows unto your honors that the aforesaid use of said inventions by the said defendant and his confederates, and the aforesaid unlawful and wrongful acts, have the effect to encourage and induce other persons to infringe and defy the letters-patent aforesaid in disregard of the aforesaid rights and privileges of your orator.

And your orator further shows unto your honors that the said defendant has been warned and requested and notified to desist and refrain said infringements and said unlawful and wrongful acts.

And forasmuch as your orator can have no adequate relief except in this court, to the end therefore that the said defendant may, if he can, show why your orator should not have the relief hereby prayed, and may upon his corporeal oath and according to his best and utmost knowledge, remembrance, information, and belief, full, true, direct,
13 and perfect answers make to the premises, and to all the several matters hereinbefore stated and charged, as fully and particularly as if separately and severally interrogated as to each and every of said matters. And that the said defendant may be compelled to render an account of the fluting-machines and of the kinds and quantity of fluted puffing or fluting made or sold, or used by him, constructed according to the inventions or improvements described in said letters-patent, or any of them, and to account for and pay over to your orator the profits by him acquired by the sale of such fluting-machines and fluted puffing or fluting, and the damages suffered by your orator from the aforesaid unlawful acts.

And your orator prays that the said defendant, Robert Werner, his agents, attorneys, servants, and workmen, and each and every of them, may be restrained and enjoined by the order and injunction of this court from directly or indirectly making, constructing, using, working, or putting into practice, operation, or use, or in any way counterfeiting or imitating the said machines for making fluting, described in said
14 letters-patent, or in either of them, and from making and selling any fluting or fluted puffing or similar article made in accordance with said inventions or improvements, and that the said defendant may be decreed to pay the costs of this suit, and that your orator may have such other or further order or relief as to this honorable court shall seem meet and shall be agreeable to equity.

May it please your honors to grant unto your orator the writ of injunction issuing out of and under the seal of this honorable court, commanding, enjoining, and restraining the said defendant, Robert Werner, his agents, attorneys, servants, and workmen, as is hereinbefore in that behalf prayed. May it please your honors to grant unto your orator the writ of subpœna issuing out of and under the seal of this honorable court, directed to the said defendant, commanding him, by a certain day and under a certain penalty therein expressed, to be and appear in this honorable court, then and there to answer the premises, and to stand to and abide by such order and decree as may be made against him.

15 And your orator will ever pray, &c.

GEO. E. KING.

M. A. KURSHEEDT,
Compl't's Sol. and of Counsel.

UNITED STATES OF AMERICA,
Southern District of New York, ss:

George E. King, the complainant in the foregoing complaint named, being duly sworn, doth depose and say that he has heard read the foregoing bill of complaint by him subscribed and knows the contents thereof, and that the same are true of his own personal knowledge, except as to those matters therein stated on information and belief, and as to those matters he believes it to be true.

And said George E. King further deposes and says that he believes that he is the first and original inventor or discoverer of the inventions and improvements patented to him, as set forth in said bill of complaint, and that the same had not been in use or described before the invention and discovery thereof by this deponent.

GEO. E. KING.

16 Subscribed and sworn to before me this 23rd day of October, 1871.

R. E. STILWELL,
U. S. Com'r for the Southern District of New York.

17 (Indorsed:) U. S. circuit court. George E. King vs. Robert Werner. Bill of complaint. M. A. Kursheedt, compl't's sol'r, 34 Johns st., New York. Filed Oct. 24, '71.

18 In the circuit court of the United States for the southern district of New York, in the second circuit. In equity.

The answer of Robert Werner, the defendant, to the bill of complaint of George E. King, complainant.

The said defendant, saving all exceptions to the insufficiencies and

other imperfections of the said bill of complaint, for answer thereunto, nevertheless, says:

He, on information and belief, denies as follows: That the said George E. King, on or before the 26th day of February, 1867, was the first and original inventor and discoverer of the supposed new and useful improvements in fluting-machines, described in the letters-patent in the bill mentioned; that isto say, in the letters-patent No. 62492, and the re-issued letters-patent No. 3000; that the same had not been known or used by others prior to his supposed invention and discovery thereof; that they had not been, at the time of his application for letters
19 patent therefor, in public use or on sale with his consent and allowance.

He admits as follows: That the said complainant did procure the original letters-patent in the bill described, No. 62492; that he surrendered the same; and that the re-issued letters-patent No. 3000 and 3001 were issued to him, purporting in each case to grant to him the rights and liberties in said letters-patent respectively described.

But this defendant insists that the said bill of complaint does not set forth either the said letters-patent nor the specifications or drawings thereto annexed, nor the legal effect thereof, nor such parts thereof as to enable this court to know or ascertain, or the defendant to learn, for what either said original letters-patent or said re-issued letters patent were granted, nor what rights or liberties they grant to the said complainant; and he prays the same benefit of this objection to the said bill of complaint as if he had demurred to the same.

This defendant, on information derived from said original & re-issued letters-patent & the specifications and drawings thereof, denies
20 that the said complainant, for good and lawful cause, surrendered the said original letters-patent No. 62492, and also denies that the said complainant did in all things comply with the conditions and requirements of the acts of Congress in such case made and provided.

This defendant charges, on information derived as last aforesaid, that the said patent was not inoperative or invalid by reason of a defective or insufficient specification, which is corrected in said specification to said re-issued letters-patent, or by reason of the patentee claiming in his specification to said original letters-patent more than he had a right to claim as new, which is not also claimed in and by the specification to the re-issued letters-patent No. 3000.

And this defendant, as evidence of the truth of said two denials last stated, and of the charge last stated, says that the said original letters-patent and the said re-issued letters-patent No. 3000 are for identically the *the* same improvement or invention, and the same are in and by said original and last-mentioned re-issued letters-patent described in
21 exactly the same words, and the same grants exactly are made by each of the same; and that the specification of the said improvement or invention annexed to the said original letters-patent and that annexed to the said re-issued letters-patent No. 3000 are, as to the claim in each contained, exactly in the same words; and that the description given in each specification, to enable others to understand the construction and operation of the said invention, is in exactly the same words, except that in the re-issued letters-patent No. 3000 it is stated that "the extent to which the material will be thus contracted laterally, as it were, or drawn up between the flutes, will be governed by the excess in length of the arched portions A' of the guide over a straigl t line or lines, connecting such arched portions at their base." And that all other parts of the specifications of the said original and said

re-issued letters-patent No. 3000 are exactly the same, with the following exception:

In the specification to the original patent it is stated: "This invention is designed more especially for making the fluted puffing
22 which is the subject of my application for letters-patent allowed September 26th, 1867, and which, when made in the manner described in the said application, requires to be washed or laundered before it will assume the shape or conformation required in the finished article."

"The invention consists in the combination of a peculiarly-shaped guide with suitable fluting-rollers; and, furthermore, in a novel construction of fluting-rollers, by which means the fabric of which the fluting is made may be properly fluted and puffed without the necessity of washing, as in the case just mentioned;" and in the specification to the re-issued letters No. 3000 it is stated: "This invention is designed for making puffing applicable to shirt-bosoms, trimming, or other purposes of dress, in which the article, as it issues from the machine, is (without having recourse to laundering) delivered in a complete form, either singly or in two or more series or rows, composed of flattened borders, with flutes running along their inner edges, and puffed or crinkled surfaces between the flutes."

23 "The invention consists in a guide constructed with one or more curved or arched portions, in combination with one or more suitable fluting-rollers, whereby the material, in passing through the machine, is fluted and contracted laterally, as it were, or drawn up between the flutes, to produce the required crinkled surface or surfaces in the puffing."

And defendant further says that the specification for the original letters-patent claimed less instead of more than is claimed in and by the said two specifications to the said two re-issued letters-patent No. 3000 and 3001. So that the defendant insists that it is apparent on the face of the said two specifications, annexed respectively to the original & the re-issued letters No. 3000, (they being the same in legal effect,) that the said original specification was not inoperative or invalid by reason of a defective or insufficient specification; and by the contents of the said specifications to the said re-issued letters-patent Nos. 3000 and 3001 the said complainant is estopped from alleging that the original specification to No. 62492 was inoperative or invalid by reason of a
24 defective or insufficient specification, and from alleging that he claimed more in his original specification than he had a right to claim as new, and this defendant therefore insists that the said re-issued patents No. 3000 & 3001 were granted contrary to law, and are void.

And this defendant further says that the said re-issued letters-patent No. 3001 are, on their face, void, for that the said re-issued letters-patent No. 3001 grant the right and liberty of making, using, and vending to others to be used, the supposed invention therein described, and in the specification thereof specified, for the term of seventeen years from the 27th day of February, 1867, and yet the specification thereof shows that the said supposed invention is not an invention of any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvement on any art, machine, or manufacture, or composition of matter, but, at the most, a new and original design, (which, however, the defendant does not admit,) and for which the right and liberty to make, use, sell, and vend the same could be granted by letters-patent for a term not exceeding three and one-half years, or seven
25 years, or fourteen years, as the said inventor might elect.

And this defendant prays the same benefit of this objection to the said bill and the said re-issued letters-patent No. 3001 in the same manner as if he had demurred to the said bill.

And this defendant further says that the said re-issued patents No. 3000 and 3001, were issued in fraud of the patent laws, and the complainant, knowingly and fraudulently, deceived the Commissioner of Patents, pretending that he had invented what is not capable of invention, and that he had invented a new article of manufacture, which the complainant knew to be untrue; and the said complainant, by surrendering said original patent and procuring a re-issue thereof, intended to procure a color of right to prevent all manufacture of the article called puffing, which he knew he never invented; that the thing described in the said specification to the said re-issued letters-patent No. 3001 was never invented by the said complainant or any one else; that the thing therein described as invented is incapable of invention in any
26 case; that the thing therein described as invented is an act of producing an article, and said act of production consists in nothing beyond the use of the machine claimed to have been invented in the specifications to the said original letters-patent and to the said re-issued letters-patent No. 3000, and the result of such use of such machine upon the material subjected to the operation of the mechanism thereof.

And the defendant is advised by counsel that the said re-issued letters-patent No. 3001 are, for the reasons last stated, also void on their face; the act which the said letters purport to grant to the complainant the exclusive right and liberty of doing being already secured to him by said re-issued letters-patent No. 3000, if the latter are valid, to wit: that no one should use the said machine thereby patented. And this defendant is also advised that, in legal effect, all that is granted by said re-issued letters-patent No. 3001 is the right to use the invention secured to him by said re-issued letters-patent No. 3000, (if the latter are valid,) and that the said regrant made by said re-issued letters-patent No. 3001, of what was then or before granted by said re-issued letters-
27 patent No. 3000, is void.

And the said defendant further says that the said puffing which is claimed to be the invention of the said complainant in the said specification in the said re-issued letters-patent is claimed to be new in no other respect than in the fact that it is formed by crinkling, gathering, or irregularly waving one portion of the strip of muslin or other material simultaneously with fluting it along the edges of such portion as at *g*, (in the drawings marked,) and forming flattened borders or portions *h* outside of the flutes, or between two next adjacent rows of them, to receive stitching, substantially as specified, and that the formation, in the manner aforesaid, is in said specification stated to be accomplished by no other means than by the working of and use of the said machine patented by said re-issued letters-patent No. 3000.

And this defendant is advised by counsel that no invention of, or new article of, or new manufacture is possible, in the sense of the patent laws, where the sole claim to novelty is, as in this case, where "as
28 a new article of manufacture" by reason of "the same being formed" by the use of certain patentable or unpatentable machinery.

And this defendant also humbly insists that an article is not new in the sense of the patent law which is new because it is such, in form or otherwise, as can be formed or made so as it is formed and made by machine no otherwise than by the use of the machine, patented or unpatented; though this defendant admits that if such be the fact, that it may be evidence that the machine had been used in the making thereof.

But the defendant says that the truth is that the said puffing in said specification to said re-issued letters-patent No. 3001 described is not such as can be made only by the use of the machine in said re-issued letters-patent No. 3000 and the specification thereof described, and as evidence thereof this defendant charges that the said specification of the complainant to his said re-issued letters-patent No. 3001 distinctly admits the truth last stated. And this defendant insists that the complainant is thereby estopped from alleging that any puffing heretofore made or hereafter to be made by this defendant is puffing which can be made only by the use of the machinery patented in and by said re-issued letters-patent No. 3001, or by any other machinery.

29

And this defendant, further answering, denies that the said pretended inventions are of great value or importance, or that the same are in use to the extent in the said bill stated, or to any considerable extent; and he also denies that he makes, uses, or sells, or causes to be made, used, and sold, any trimming made in accordance with the description contained in the said pretended letters-patent to the said King, or any re-issue or re-issues thereof. But this defendant admits that he does, and he insists rightfully, make, use, and sell trimming in accordance with the description contained in letters-patent granted to this defendant on the 29th day of November, 1870, and under & in accordance with a caveat for an improvement in making fluted trimmings or puffings, duly filed in the United States Patent-Office October 30th, 1871, which said patent and caveat are now remaining of record in the Patent-Office of the United States, and as by reference to which or to a duly-authenticated copy thereof, ready in court to be produced if required, will more fully and at large appear, and by virtue whereof this defendant became the sole owner of all the rights and privileges granted and secured, or intended to be granted and secured, by said letters-patent, and the filing of said caveat in the Patent-Office of the United States.

30

And he further denies that the alleged new letters-patent to said King embody the invention as described and claimed in said first patent; but said defendant is advised by counsel, and therefore avers, that said re-issued letters-patent, by reason of the premises, are invalid and of no effect.

This defendant, further answering, denies that the complainant is, or ever was, entitled to or possessed of the exclusive right or liberty to use the pretended improvements as in said bill is averred.

And the defendant, further answering, denies that the manufacture, use, or sale of the trimming or trimming-puffing, made according to the description contained in the letters-patent granted as aforesaid to the defendant on the said 29th day of November, 1870, and in the said caveat filed by him in the United States Patent-Office on the 30th day of October, 1871, is an infringement of the said letters-patent alleged to have been issued to and used by said King.

31

This defendant, further answering, avers that he does not make, use, or sell, or cause to be made, used, or sold, nor has he heretofore made, used, or sold, nor caused to be made, used, or sold, any trimming constructed in accordance with the said letters-patent, or either of them, or in violation of, or any infringement of, any exclusive right granted to said King; and he therefore denies the allegations in respect thereto in the said bill contained, and he also denies that the trimming so made or sold by this defendant, according to the said patent issued to this defendant, and the said caveat so filed as aforesaid, embodies or contains the invention or improvement, or any part thereof, described and pa-

tented in said letters-patent to said King, or either of them, or the combination, or means, or machinery essentially as specified or claimed in either of the letters-patent as the invention of said King.

32 And this defendant also denies that, by reason of the manufacture, use, or sale of any such, or of any, trimming he has so derived or received, or is now deriving or receiving, large gains or profits to the amount in said bill stated or to any considerable amount.

And the defendant, further answering, according to the best of his knowledge, information, and belief, denies that the said King was the original or first inventor of the said pretended improvements described and claimed as his inventions in either or any of said letters-patent so alleged to have been issued to said King in his bill of complaint, but he avers that the same, or substantial or material parts thereof so claimed as new, was and were invented and put into practical public use at and about the several times and places following within the United States, and by the following persons, to wit:

At the city of New York, at No. 126 Allen street, William Weitling, & Carolina Weitling, and Johanna Toedt, as early as 1855; also at No. 75 Bowery, and corner of Avenue B & 12th st. These persons now reside at No. 178 Staunton st., in the city of New York. And also by

33 one J. A. Pipo, manufacturer of puffing and fancy bosoms, factory No. 269 Meadow st., Hoboken, New Jersey; office in New York, No. 154 Pearl st. In 1860 & 1861 was employed as a machinist by Douglas & Sherwood, Nos. 11 & 13 White street. Sold, in 1864, in city of New York and in Hoboken, New Jersey, on 4th st. Sold, also, by Herman Lautenback, No. 312 Broadway, New York, in 1864 & 1865.

And this defendant, further answering, says that said trimming, so made, used, and sold as aforesaid, by said persons, in said cities of New York, Hoboken, and elsewhere, was in construction and in all respects similar to what is claimed as new in said letters-patent to said King, bearing date February 26th, 1867, and in both of said re-issues dated June 23, 1868.

And the defendants, further answering, on information and belief, says that if the claim of the patent to said King, numbered 3000, shall be construed as insisted upon by complainant, the said improvement, mechanism, and devise, or substantial and material parts thereof,

34 were, prior to the patented invention thereof by said King, publicly used by the following persons, to wit: William Weitling, Caroline Weitling, Johan'a Toedt, J. A. Pipo, Douglass & Sherwood, Herman Lautenback, Charles Sully, and others, at the time and places hereinbefore designated & warned.

And the defendant, further answering, says that, of his own knowledge, at the places and by the persons aforesaid, puffing, of the same description as mentioned in said re-issued patent No. 3001, and in the specifications to the same, annexed and illustrated by the drawings therein referred to and thereto annexed, a copy of all which are to this answer annexed, and made part of the same, for the purpose of making this allegation of the defendant specified, was made and sold, although in design or ornamental shape (but in design and ornamental shape only) the same differed from the design and ornamental shape of the puffing on the said drawing in said re-issued letters-patent No. 3001 annexed. And the defendant is advised by counsel that the exclusive right and liberty of making, and vending to others to be

35 used, and for the invention of an article exactly the same as another and older article in all other respects, except in design and ornamental shapes, cannot be granted under and by virtue of the

laws of the United States, and that the said re-issued patent, No. 3001, purporting to grant such right, is void.

And the defendant is also advised that this re-issued patent is void, and on its face, in so much as it does not pretend to be a patent for a new manufacture, nor for the invention of a new manufacture, nor for the invention of a new production, but for the invention of the production of a new article of manufacture and for the invention of a production as a new article of manufacture, and the production specified is not a new or old manufacture, but the operation or act of making, by means of a patented machine, of an article which it is not pretended is new, even in shape & form.

And the defendant is advised, and so says, that puffing, being known as aforesaid prior to the said pretended invention thereof, no puffing, however different in structure from that before known, can be a subject of patent, if the said difference in structure consists in its
36 being a puffing in which the crinkled portion (a crinkled portion being common to all puffing) is such as would be formed by the patented machinery used to produce it.

And the defendant, further answering, says, that the said King is not the original or first inventor of what is claimed as new in any or either of the patents or re-issues, or of any part or parts thereof, and that the same or substantial and material parts thereof were long prior to his alleged invention thereof, described in published works in the United States, and in England, and France, and in applications, letters showing, and models on file and on deposit in the U. S. Patent-Office at Washington.

And the defendants, further answering, avers that, as to so much of the complainant's bill as refers to and sets out certain judicial proceedings by complainant against one Lehman Mandlebaum, in the circuit court of the United States, and as to whether the same are well and sufficiently defended by said Mendlebaum he has not sufficient
37 knowledge on which to form a belief as to the truth thereof, but that this defendant was not a party to any such judicial proceedings, and had no notice that the same were pending, and as to this defendant said proceedings are wholly immaterial, and it is not necessary that he should admit or deny the same.

This defendant denies that there is any other matter in the bill of complaint contained material or necessary for him to make answer unto, and not herein and hereby well and sufficiently answered, confessed, traversed, avoided, or denied that is true to the knowledge and belief of said defendant, and he therefore prays that the said bill be dismissed with costs.

CABELL & DORSEY,
Def't Solicitors & of Counsel.

SOUTHERN DISTRICT OF NEW YORK, *sct:*

Robert Werner, being duly sworn, deposes and says that he has read the foregoing answer and knows the contents thereof, and that the same is true of his own knowledge, except as to matters therein stated on information & belief, and as to those matters he believes it to be true.

38 ROBERT WERNER.

Sworn to before me this 10th day of Jan'y, 1872.

JOHN HEWETT,
Notary Public, N. Y. Co.

Resworn to before me this 12th day of Jan'y, 1872.

JOHN A. SHIELDS,
U. S. Commissioner S. D. of N. Y.

39 (Indorsed:) United States circuit court, southern district of New York. George E. King vs. Rob't Werner. In equity. Answer. A. P. Whitehood, Cabells & Dorsey, def't's sol'r, No. 6 Wall st. Filed Jan'y 10, 1872.

40 In the circuit court of the United States for the southern district of New York, in the second circuit.

GEORGE E. KING
vs.
ROBERT WERNER.

The replication of George E. King, complainant, to the answer of Robert Werner, defendant.

This repliant, saving and reserving to himself now and at all times hereafter all and all manner of benefit and advantage of exception which may be had or taken to the manifold insufficiencies of the said answer of said defendant, for replication thereunto says that he will aver, maintain, and prove his bill of complaint to be true, certain, and sufficient in the law to be answered unto; and that the said answer of the said defendant is uncertain, untrue, and insufficient to be replied unto by this repliant, without this, that any other matter or thing whatsoever in the said answer contained, material or effectual in the law to be replied unto, and not herein and hereby well and sufficiently
41 replied unto, confessed and avoided, traversed or denied, is true; all which matters and things this repliant is and will be ready to aver, maintain, and prove, as this honorable court shall direct, and humbly pray as in and by his said bill he has already prayed.

M. A. KURSHEEDT,
Solicitor for Complainant.

42 (Indorsed:) U. S. circuit court. George E. King vs. Robert Werner. Replication. Manuel A. Kursheedt, compl't's sol'r, 13 & 14 John street, New York. Filed March 4, '72.

43 *Exhibit, Re-issue* 3000. *R. E. S., Examiner.*

The United States Patent-Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy, from the records of this office, of the re-issued letters-patent granted George E. King, June 23d, 1868, No. 3000, for imp't in fluting-machines.

In testimony whereof I, Sam'l A. Duncan, Acting Commissioner of Patents, have caused the seal of the Patent-Office to be hereunto affixed this thirtieth day of October, in the year of our Lord one thousand eight hundred and seventy-one, and of the Independence of the United States the ninety-sixth.

[L. S.]

SAM'L A. DUNCAN,
Acting Comm'r.

No. 3000. Re-issue.

The United States of America to all to whom these letters-patent shall come:

Whereas George E. King, of New York, New York, has alleged that

he has invented a new and useful improvement in fluting-machines, for which letters-patent were issued to him, dated February 26, 1867, which letters having been surrendered by him, the same have been cancelled, and new letters ordered to issue to him, on two separate amended specifications, and has made oath that he is a citizen of the United
44 States; that he verily believes he is the original and first inventor or discoverer of said improvement, and that the same hath not, to his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents, praying that a patent may be issued therefor.

These are therefore to grant to the said George E. King, his executors, administrators, or assigns, for the term of seventeen years from the twenty-sixth day of February, one thousand eight hundred and sixty-seven, the full and exclusive right and liberty of making, using, and vending to others to be used the said improvement, a description whereof is given in the annexed schedule, and made a part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent-Office to be hereunto affixed.

Given under my hand, at the city of Washington, this twenty-third day of June, in the year of our Lord one thousand eight hundred and sixty-eight, and of the Independence of the United States of America the ninety-second.

[L. S.]

W. T. OTTO,
Acting Secretary of the Interior.
A. M. STOUT,
Acting Commissioner of Patents.

Countersigned and sealed with the seal of the Patent-Office.

45 UNITED STATES PATENT-OFFICE.

George Edwin King, of New York, N. Y. Letters-Patent No. 62492, dated February 26, 1867; re-issue No. 3000, dated June 23, 1868. Division A. Improvement in fluting-machines.

The schedule referred to in these letters-patents, and making part of the same.

To all whom it may concern:

Be it known that I, George Edwin King, of the city, county, and State of New York, have invented certain new and useful improvements in fluting-machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front elevation of a fluting-machine constructed according to my invention.

Figure 2 is an end elevation of the same.

Figure 3 is a detached section representing a portion of the same.

Figure 4 is a plan view of a piece of the fluted puffing for the manufacture of which my invention is intended.

Similar letters of reference indicate corresponding parts in all the figures.

This invention is designed for making puffing applicable to shirt-

bosoms, trimming, or other purposes of dress, in which the article, as it issues from the machine, is (without having recourse to laundering) delivered in a complete form, either singly or in two or more series or rows, composed of flattened borders, with flutes running
46 along their inner edges, and puffed or crinkled surfaces between the flutes.

The invention consists in a guide constructed with one or more curved or arched portions, in combination with one or more suitable fluting-rollers, whereby the material, in passing through the machine, is fluted and contracted laterally, as it were, or drawn up between the flutes to produce the required crinkled surface or surfaces in the puffing.

To enable others to understand the construction and operation of my invention, I will proceed to describe it with reference to the drawings.

A represents the frame which supports the working parts of the apparatus, and situated longitudinally, in the upper part of which are two fluting-rollers, B and C, which are situated one above the other, with their ends projecting through large vertical slots, *a*, formed in the ends of the frame A; the roller B being supported in semicircular bearings formed in the lower ends of the slots *a*, and furnished at one end with a crank, *b*, and the upper roller, C, working in semicircular bearings *c*, formed in sliding-blocks *c*, placed upon the ends thereof, and pressed down upon the same by a spring, *d*, the tension of which may be regulated by means of a vertical screw, *e*, situated centrally in the top of the frame A.

When desired, the upper roller, C, may be held within a given distance of the lower roller by vertical set-screws, *f*, situated one at each end of the top of the aforesaid frame A, and acting upon the sliding or adjustable bearings *c*.

The puffing is represented in Fig. 4, and is formed of strips of any suitable fabric, and of a width, when finished, nearly, or quite equal to the length of the fluting-rollers B C, and is formed with longitudinal portions, *g*, which are fluted transversely to the length of the strip aforesaid; also with portions *h*, in which the fabric is pressed flat, and through which longitudinal rows of stitching are formed, to render permanent the conformation of the puffing; and also with portions *l*, which are intended to be wider than the parts just described,
47 and which are puffed or crinkled in such manner as to possess an irregular wavy surface.

In order to form these several portions of the puffing, each of the fluting-rollers B C is formed with as many annular or circumferential series, A′, of grooves and flutes as there are fluted portions *g* upon the puffing, with as many narrow annular faces B′ as there are flattened portions *h*, and with as many comparatively broad portions C′ as there are puffed portions *i* in the finished puffing; each of the said parts of the rollers being of the same width as that portion of the completed puffing which it is designed to shape, and the circumferential faces or portions C′ being of such diameter that when the two rollers are in proper position, those upon one roller will be situated at such distance from those upon the other that no considerable pressure will be exerted upon the fabric in passing between them and the several series A′ of grooves and flutes upon one roller gearing into those upon the other roller.

D indicates pressers, the rearmost end of each one of which is curved downward, and fitted upon the upper rearmost part of each of the faces B′ of the lower roller B, with its forward end curved upward in contact

with the forward sides of the corresponding face, B′, upon the other roller, as shown in Figs. 2 and 3, the aforesaid rearmost ends of these pressers D being pressed against the roller B by set-screws *j* passing through a horizontal bar or brace, *k*, secured upon the rear of the frame A.

Fixed upon the forward side of the frame A, in front of the roller B, is a horizontal supporting-brace, *m*, which has fixed upon it an inclined plate, *n*, upon which is supported the inclined guide E, which is composed of two pieces of sheet metal, secured one over the other, at such a distance apart as to permit the passage of the cloth or fabric between them; and those parts of this guide E, in front of the plain cylindrical portions C′ of the rollers, are curved upward or arched transversely, as shown at *a′*, in such manner that the width of the fabric passed between each pair of the plain portions, C′, will be greater, if stretched out
48 to its full extent, than the width of the said portions, so that the said fabric, by means of its increased width, will be crinkled or puffed in passing between the aforesaid portions C′, as will be presently fully set forth.

The end of the strip of cloth or fabric from which the fluted puffing is to be formed is passed into and through the guide E and between the rollers B C, and a rotary motion in the direction of the arrow, shown in Fig. 2, is communicated to said rollers by turning the crank *b*, or by other suitable means.

The fabric is drawn lengthwise between the rollers, those portions thereof which pass between the several opposite series A′ of grooves and flutes of the two rollers being fluted, as shown at *g* in Fig. 4, while those portions of the said fabric which pass between the smooth, narrow annular faces B′ of the rollers, being formed into gathers by the fluting of the fabric at the sides or edges thereof, are pressed flat by passing under the pressers D, as the fabric is drawn along, at the same time that those portions of the fabric drawn through the curved or arched parts *a′* of the guide E, being, if stretched to their full extent, of a width greater than that of the smooth cylindrical portions C′, and being also gathered by the fluting formed at their sides or edges, are caused to assume a crinkled or puffed form, as they are passed between the aforesaid portions C′, the distance between the opposite smooth portion C′ aforesaid being such that no pressure is exerted upon the fabric passing between them beyond that required to simply press the convex surfaces thereof downward to a sufficient degree to insure the shaping thereof into the puffed condition just herein described.

The extent to which the material will be thus contracted laterally, as it were, or drawn up between the flutes, will be governed by the excess in length of the arched portions *a′* of the guide over a straight line or lines connecting such arched portions at their base.

By these means the fluted puffing is brought into the form required in the finished article without the necessity of washing the same in order to bring the puffing into such form.

49 To complete the puffing, longitudinal rows of stitching are formed in the flat parts, *h*, of the puffing, to retain it in shape, and, when desired, the puffing as thus completed may be divided longitudinally in the said parts *h*, to separate it into narrow pieces, as required for various trimming purposes.

What I claim as new, and desire to secure by letters-patent, is—

The guide E, constructed with one or more curved or arched portions

a', in combination with suitable fluting-rollers, substantially as herein set forth, for the purpose specified.

GEO. E. KING.

Witnesses:
A. LE CLERC.
E. P. TRACY.

[Here follow two diagrams, marked pages 50 and 51.]

52 *Exhibit, Re-issue* 3001.—*R. E S., Examiner.*

The United States Patent-Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy, from the records of this office, of the re-issued letters-patent granted George E. King, dated June 23d, 1868, No. 3001, for imp't in fluted puffing.

In testimony whereof I, Sam'l A. Duncan, Acting Commissioner of Patents, have caused the seal of the Patent-Office to be hereunto affixed this thirtieth day of October, in the year of our Lord one thousand eight hundred and seventy-one, and of the Independence of the United States the ninety-sixth.

[L. S.] SAM'L A. DUNCAN,
Acting Comm'r.

No. 3001. Re-issue.

The United States of America to all to whom these letters-patent shall come:

Whereas George E. King, of New York, New York, has alleged that he has invented a new and useful improvement in fluted puffing, (for which letters-patent were issued to him dated February 26, 1867, which letters having been surrendered by him, the same have been cancelled, and new letters ordered to issue to him on two separate amended
53 specifications,) and has made oath that he is a citizen of the United States; that he verily believes he is the original and first inventor or discoverer of the said improvement, and that the same hath not, to his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents praying that a patent may be issued therefor:

These are, therefore, to grant to the said George E. King, his executors, administrators, or assigns, for the term of seventeen years from the twenty-sixth day of February, one thousand eight hundred and sixty-seven, the full and exclusive right and liberty of making, using, and vending to others to be used, the said improvement, a description whereof is given in the annexed schedule, and made a part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent-Office to be hereunto affixed.

Given under my hand at the city of Washington this twenty-third day of June, in the year of our Lord one thousand eight hundred and sixty-eight, and of the Independence of the United States of America the ninety-second.

[L. S.] W. T. OTTO,
Acting Secretary of the Interior.
A. M. STOUT,
Acting Commissioner of Patents.

Countersigned and sealed with the seal of the Patent-Office.

material as produced by or through the arched portions of the guide that give an irregular or wavy surface to such portions, by reason of the width of the material passing out of or through the arched portions of the guide being greater than the distance between the
56 fluted portions of the roller. The longitudinal rows of stitching *s* in or along the flattened portions *h* may either be put in by hand or by any suitable sewing-machine.

A puffing is thus made having gathered, crinkled, or wavy portions *i*, without having recourse to laundering or washing to effect such conformation, thereby economizing labor and material, and putting the article in a finished state on the market in that fresh condition which washed goods are devoid of.

What is here claimed, and desired to be secured by letters-patent, is—

The within-described puffing as a new article of manufacture, the same being formed by crinkling, gathering, or irregularly waving one portion of the strip of muslin or other material simultaneously with fluting it along the edges of such portion, as at *g*, and forming flattened borders or portions *h* outside of the flutes, or between two next adjacent rows of them, to receive stitching, substantially as specified.

GEO. E. KING.

Witnesses:
EDW'D P. TRACY.
A. LE CLERC.

[Here follows diagram, marked "Page 56."]

57 Circuit court of the United States for the southern district of New York.

GEORGE E. KING
vs.
ADOLPH HERRMANN AND SIMON LAUTENBACH.

Depositions taken on part of complainant for final hearing, under the 67th rule as amended. In equity.

FRIDAY, *August 30th*, 1872.

Present, S. D. Law, esq.; M. A. Kursheedt, esq., counsel for complainant; and Orlando Dorsay, esq., counsel for defendants.

Adjourned to 3d September at 11 a. m.

TUESDAY, *September 3d*, 1872.

Present, counsel as before.

Counsel for complainant produces and puts in evidence a certified copy of the re-issued letters-patent No. 3000, granted to the complainant in this suit on the 23d day of June, 1868, for improvement in fluting-machines, and which is marked "Exhibit, Re-issue 3000, R. E. S., ex'r."

58 (Counsel for defendants objects to the introduction of patent 3000 on the ground that the defendants are not manufacturers, but merchants only; and that the patent No. 3000 is not involved in the real issue to be tried in this action.)

Counsel for complainant also puts in evidence a certified copy of re-issued letters-patent No. 3001, dated June 23d, 1868, granted to the

a', in combination with suitable fluting-rollers, substantially as herein set forth, for the purpose specified.

GEO. E. KING.

Witnesses:
A. LE CLERC.
E. P. TRACY.

[Here follow two diagrams, marked pages 50 and 51.]

52 *Exhibit, Re-issue* 3001.—*R. E S., Examiner.*

The United States Patent-Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy, from the records of this office, of the re-issued letters-patent granted George E. King, dated June 23d, 1868, No. 3001, for imp't in fluted puffing.

In testimony whereof I, Sam'l A. Duncan, Acting Commissioner of Patents, have caused the seal of the Patent-Office to be hereunto affixed this thirtieth day of October, in the year of our Lord one thousand eight hundred and seventy-one, and of the Independence of the United States the ninety-sixth.

[L. S.]

SAM'L A. DUNCAN,
Acting Comm'r.

No. 3001. Re-issue.

The United States of America to all to whom these letters-patent shall come:

Whereas George E. King, of New York, New York, has alleged that he has invented a new and useful improvement in fluted puffing, (for which letters-patent were issued to him dated February 26, 1867, which letters having been surrendered by him, the same have been cancelled, and new letters ordered to issue to him on two separate amended
53 specifications,) and has made oath that he is a citizen of the United States; that he verily believes he is the original and first inventor or discoverer of the said improvement, and that the same hath not, to his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents praying that a patent may be issued therefor:

These are, therefore, to grant to the said George E. King, his executors, administrators, or assigns, for the term of seventeen years from the twenty-sixth day of February, one thousand eight hundred and sixty-seven, the full and exclusive right and liberty of making, using, and vending to others to be used, the said improvement, a description whereof is given in the annexed schedule, and made a part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent-Office to be hereunto affixed.

Given under my hand at the city of Washington this twenty-third day of June, in the year of our Lord one thousand eight hundred and sixty-eight, and of the Independence of the United States of America the ninety-second.

[L. S.]

W. T. OTTO,
Acting Secretary of the Interior.
A. M. STOUT,
Acting Commissioner of Patents.

Countersigned and sealed with the seal of the Patent-Office.

54 UNITED STATES PATENT-OFFICE.

George Edwin King, of New York, N. Y. Letters-patent No. 62492, dated February 26, 1867. Re-issue No. 3001, dated June 23, 1868. Division B. Improvement in fluted puffing.

The schedule referred to in these letters-patent and making part of the same.

To all whom it may concern:

Be it known that I, George Edwin King, of the city, county, and State of New York, have invented a new and improved puffing, of which the following is a full, clear, and exact description: reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 represents a face view of my improved puffing.

Figure 2, an outside edge view of the same.

Figure 3, a longitudinal section, taken as indicated by the line *x x* in Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention consists in the production, as a new article of manufacture, of a puffing applicable to shirt-bosoms, trimming or other purposes of dress, in which the completed article, prior to laundering or washing, is made up of either a single row, or two or more parallel series or rows, each consisting of flattened borders, with flutes running along their inner edges, and a puffed, or gathered, or crinkled surface or surfaces between the flutes.

55 Referring to the accompanying drawing, the puffing there represented consists of flattened portions, *h*, with flutes, *g*, arranged along the inside edges of such flattened parts or borders, and with a crinkled or gathered surface, *i*, to the portions lying between the flutes, longitudinal rows of stitching *s* being afterwards, it may be, passed through the flattened borders *h* at, say, their edges, to render permanent the conformation of the puffing, and, if necessary, strips or tapes basted on or along such flattened parts. Where the material is of sufficient width to form two or more parallel rows of puffed, gathered, or crinkled portions, *i*, with fluted borders *g*, separated by plain surfaces or borders, *h*, then the article so formed may, if desired, be divided into narrow pieces or strips of puffing, by cutting the same longitudinally through the flattened portions *h*, in direction of their length.

The mechanism, where machinery is used for the purpose, necessary to produce a puffing of this character, may be varied, but for the purpose of illustrating how, or one way in which the same may be done automatically or by mechanism, it will suffice here to refer briefly to a machine for the purpose, which was secured to me by letters-patent No. 62492 of the United States, bearing date February 26, 1867, and which is now the subject of an application for re-issue. Thus, the piece of muslin or other fabric may be entered through a hollow inclined guide, formed partly of an arched and partly of a straight form, to or between rollers and pressers, the rollers being made with flattened ends or portions that act in concert with the pressers, to form the flat portions *h* of the puffing, and with grooves or flutes inside of such flattened ends to establish the flutes *g*, while the intervening portions of the rollers opposite the arched portion or portions of the guide are further from each other, and simply serve to act in a light manner upon the curved surfaces of the puffed, gathered, or crinkled portions *i* of the

material as produced by or through the arched portions of the guide that give an irregular or wavy surface to such portions, by reason of the width of the material passing out of or through the arched portions of the guide being greater than the distance between the
55 fluted portions of the roller. The longitudinal rows of stitching *s* in or along the flattened portions *h* may either be put in by hand or by any suitable sewing-machine.

A puffing is thus made having gathered, crinkled, or wavy portions *i*, without having recourse to laundering or washing to effect such conformation, thereby economizing labor and material, and putting the article in a finished state on the market in that fresh condition which washed goods are devoid of.

What is here claimed, and desired to be secured by letters-patent, is—

The within-described puffing as a new article of manufacture, the same being formed by crinkling, gathering, or irregularly waving one portion of the strip of muslin or other material simultaneously with fluting it along the edges of such portion, as at *g*, and forming flattened borders or portions *h* outside of the flutes, or between two next adjacent rows of them, to receive stitching, substantially as specified.

GEO. E. KING.

Witnesses:
EDW'D P. TRACY.
A. LE CLERC.

[Here follows diagram, marked "Page 56."]

57 Circuit court of the United States for the southern district of New York.

GEORGE E. KING
vs.
ADOLPH HERRMANN AND SIMON LAUTENBACH.

Depositions taken on part of complainant for final hearing, under the 67th rule as amended. In equity.

FRIDAY, *August 30th*, 1872.

Present, S. D. Law, esq.; M. A. Kursheedt, esq., counsel for complainant; and Orlando Dorsay, esq., counsel for defendants.

Adjourned to 3d September at 11 a. m.

TUESDAY, *September 3d*, 1872.

Present, counsel as before.

Counsel for complainant produces and puts in evidence a certified copy of the re-issued letters-patent No. 3000, granted to the complainant in this suit on the 23d day of June, 1868, for improvement in fluting-machines, and which is marked "Exhibit, Re-issue 3000, R. E. S., ex'r."

58 (Counsel for defendants objects to the introduction of patent 3000 on the ground that the defendants are not manufacturers, but merchants only; and that the patent No. 3000 is not involved in the real issue to be tried in this action.)

Counsel for complainant also puts in evidence a certified copy of re-issued letters-patent No. 3001, dated June 23d, 1868, granted to the

complainant in this suit, for "improvement in fluted puffing," and which is marked "Exhibit, Re-issue 3001, R. E. S., ex'r."

Counsel for complainant also puts in evidence a shirt-bosom, which is marked "Complainant's Exhibit, Herrmann & Lautenbach, R. E. S., ex'r."

(It is admitted by defendants' counsel that the defendants in this suit, previous to the commencement thereof, sold shirt-bosoms, in construction like the shirt-bosom marked "Complainant's Exhibit, Herrmann & Lautenbach.")

S. P. KITTLE, being duly sworn as a witness on the part of the complainant, deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

A. Samuel P. Kittle. I am 47 years old. I live in New York City. I am a manufacturer and mechanician.

Q. 2. Have you been accustomed to examine machines and inventions of different kinds, and letters-patent of inventions and machines, for the purpose of comparing as to the identity or dissimilarity of inventions in machines; and have you heretofore been examined as a witness in the U. S. circuit court as an expert in patent causes, and, if so, for how many years have you been acting as expert in patent causes?

59 A. I have been accustomed to examine mechanical constructions and published descriptions of mechanical constructions and machines and inventions and patents for the purpose of ascertaining whether they were alike or different as constructions or inventions; and I have been frequently examined in the U. S. courts as a mechanical expert in patent cases during the past seventeen years.

Q. 3. Have you examined the letters patent re-issues 3000 and 3001 which are exhibits in this cause, and are you familiar with or do you understand the inventions described in such patents?

(Defendants' counsel objects to so much of the question as relates to the patent 3,000, on the same grounds as stated in the introduction of the same as an exhibit.)

A. I have examined certified Patent-Office copies of the patents enquired about, and understand the same.

Q. 4. Please state what you regard to be the invention described and claimed in the "Exhibit, Re-issue 3001," and in connection therewith look at the shirt-bosom marked "Exhibit, Herrmann & Lautenbach," and state whether, in your opinion, said shirt-bosom is within or contains the invention described and claimed in said re-issue; and give your reasons for any opinion you may express.

A. The invention specified in re-issue 3001 consists in the production of a new article of trimming, adapted to shirt-bosoms, or other purposes, and manufactured from muslin or other suitable material; being distinguished by two plain bands or flattened borders, two rows of fluting within said bands or borders, and lying along by the side of them, which rows of fluting are separated by a zone or space of gathered, crinkled, puffed, or irregularly-waved surface, which is made simultaneously with the other parts and completed without resort to laundering. The plain bands or flattened borders, the inventor states, may be stitched by machine or hand after the same have been produced as above.

60 The patent specifies that one mode of making the above trimming is by the employment of a machine for that purpose, which was secured to him by letters-patent No. 62492, of the United States, dated February 26th, 1867; and then follows in the body of the specification a brief description of how the above article may be manufactured automatically or by said machine.

(Defendants' counsel objects to so much of the above answer as refers to patent No. 62492, mentioned by the witness, and to what purports to be extracts of any of the patents in evidence.)

The inventor specifies that where mechanism is used for the purpose necessary to produce a puffing of this character, it may be varied, so that I do not understand him to confine himself to any special machine or contrivance specified—

(Last part of the answer objected to by defendants' counsel, on the ground that the answer is inferential or an inference of the witness; 2nd, on the ground that it is a conclusion of law and not a statement of facts; 3rd, on the ground that it is not relative to the issue in this case.)

for producing the goods, so long as the manufactured article contains a wavy, puffed, crinkled, or gathered centre of irregular form, bounded by regular rows of fluting, having flattened borders or plain bands on their exterior, complete singly or in duplication, in a piece, without resort to laundering, and capable of being stitched in the flattened borders. The "Exhibit, Herrmann & Lautenbach," is a shirt-bosom containing two rows of puffed trimming, one on each part or side. The flattened borders on each row in this case are stitched to the binding-linen, part
61 of the bosom; and on the inside of the flattened borders I find rows of regular fluting separated by a zone of irregularly-crinkled, gathered puffing. The material of which the trimming is here made is taken up in its breadth by some device, so that in its transverse section, between the flutings, it is longer than a direct line, and in its longitudinal extent it is equal to the fluting as finished; and if straightened with the fluting would be equal to the same; so that, of necessity, it is crinkled and of irregular form, both in its transverse and longitudinal line, the same as that described and illustrated in the re-issued patent 3001. There is a slight difference in its appearance from that shown in the drawing of the patent, apparently having been marked in a centre line by some instrument or device over which it has been drawn or pressed, which has given a general crooked appearance to the puffed zone. This I do not regard, however, as any essential difference at all; the characteristics of the patented trimming are found in the exhibit in combination and arrangement and relation complete, as specified in the patent 3001.

(Counsel for defendants objects to the answer upon the ground stated in his last previous objection.)

Q. 5. Please look at the shirt-bosom, "Exhibit, Hermann & Lautenbach," at the portion thereof marked "A," where I have ripped the stitching, fastening each side of one of the rows of puffed trimming to the adjacent parts, and state whether in the trimming thus disconnected or loosened from the adjacent parts you find the combination of flattened borders, lines of regular fluting, and a zone of crinkled, gathered, or irregularly-waved appearance, such as is described in the patent re-issue 3001.

A. I do.

Q. 6. And are such several flattened, fluted, and irregularly-waved portions in such row of trimming in that exhibit in the same relation to each other as in the trimming described in said patent, or otherwise?

62 (Counsel for defendants objects to the above question and the preceding one on the ground that the same are leading and suggestive of the answer required by the complainant.)

A. They are in the same relation as that described and shown in patent 3001.

Adjourned to the 6th inst., at 11 a. m.

NEW YORK, *Friday, Sept. 6th*, 1872.

Present, counsel as before.

Samuel P. Kittle, (resumed.)

(Direct examination closed; counsel for complainant reserving right to further examine the witness if he should deem it necessary; full right, however, extended to the counsel for defendants to further re-cross after such examination, if he should so desire.)

Cross examined by Mr. Dorsay, counsel for defendants:

X 7. In your answer to interrogatory 1, you say you are a manufacturer: say of what are you a manufacturer.

A. Of bedding, spiral springs, cots and spring-mattrasses, for the last fourteen years.

X 8. You also say that you are a mechanician; what do you do in that line?

A. I mean by a mechanician, one skilled in mechanics. I have had an experience, as I have testified in my direct, in making myself familiar and skillful in general mechanical information. As a practical mechanic, I have been schooled since a boy in mechanical pursuits.

X. 9. State what special mechanical pursuits.

63 A. I served an apprenticeship as carpenter and joiner and builder: before which time, however, I was connected part of the time as an assistant in carriage-making and blacksmithing, and subsequent to my apprenticeship, in connection with a brother, we invented and manufactured and introduced a planing-mill for planing and matching boards; it was called "Kittle's floor-dresser." In the introduction and manufacture of that machine, I had the oversight, and worked myself in getting up machinery in connection with these floor-dressers. I ran in the city of Buffalo machinery for manufacturing doors, sash, blinds, mouldings, and casings, and carried on the building business. About this time I invented and patented a door-fastening, known as "Kittle's door-fastening." I also invented and introduced a railroad-rest. I also invented and patented a railroad-switch. I also associated myself with one Stanthorp in the perfection, completion, and introduction of a machine for moulding candles, which machine has gone into general use throughout this country, France, Great Britain, and largely in Germany, South America, and the West Indies, as I am informed. In 1853 or 1854 I opened an office in the city of Buffalo as a solicitor of patents, and prepared applications for patents for two or three years: since when I have been acting as mechanical expert largely in the U. S. courts, as I have before testified, and in business here, at 210 and 212 Canal street, as before testified.

X. 10. How long did you serve as an apprentice at the carpenter, joining, and building?

A. About three years.

X. 11. Did you follow that business after the termination of your apprenticeship; and, if so, for how long after?

A. I followed the business thereafter about two or three years, if I recollect, in which time the floor-dresser was introduced and my business took the character of manufacturing doors, &c., of which I have spoken.

X. 12. Are you a member of the bar also?

A. No, sir.

64 X. 13. Are you acquainted with woven fabrics?

A. I am; my business has called me especially to that for the last 13 or 14 years, as I have used a great deal of muslin and other woven fabrics in my business.

X. 14. Are you acquainted with puffings, flutings, and crimpings?

A. I am.

X. 15. How long have you been acquainted with them?

A. I think my very special attention was first called to trimmings containing the characteristics referred to in the question about three years ago; since when I have been conversant with goods that have been crimped, puffed, and different trimmings.

X. 16. In your direct testimony you say the fluting of which you testify as the invention of the complainant is separated by a zone or space of gathered, crinkled, puffed, or irregularly-waved surface. Suppose it was regularly waved, regularly gathered, regularly crinkled, regularly puffed, or regularly shaped in the form of diamonds, or hearts, or triangles, would that make it any the less an article of puffing?

A. Yes; it would be a different article from that described in the re-issued patents. They specify an irregularity instead of an uniformity in that particular.

X. 17. But would it not nevertheless be an article of puffing?

(Objected to by complainant's counsel as inquiring of that which is outside of the patent sued on in this case, and outside any legitimate issues in the case, and as not proper cross-examination of anything introduced on the direct examination; and if defendants think best to go into new matter, they will be considered as making the witness their own in reference to such new matter.)

A. It would not, the specifications in patents 3000 and 3001 defining puffing. In my opinion it would be embossing or stamping, in

65 contradistinction to puffing, as it would necessitate different mechanism to produce the definite instead of the indefinite form or shape.

X. 18. Do you mean to say that there can be no puffing unless it is such as is described by you or such as you have described in your direct testimony?

A. No; I do not mean to say that.

X. 19. State what you do mean to say.

(Objected to by complainant's counsel as the witness has not been asked before this last question a general question, what is puffing? and because the last question impliedly seeks an answer to such general question, which, however, is irrelevant, as not being within the issue in this case.)

A. I mean to say that possibly there might be a puffing with some modification or change that could be justly called a puffing, and yet not the puffing described.

X. 20. State what that or those changes might be, from your description of puffing, and still be an article of puffing.

(Same objection as to cross-question 17.)

A. This puffing seems to be quite a valuable article in the market, and if I was inventing I should hesitate to expose my invention; but I am not inventing and cannot describe what I have not invented.

X. 21. Is that all?

A. Yes, that's all.

X. 22. Is that the only answer you can give?

A. It is the only one I think of now.

X. 23. Do you wish to be understood as saying that you described in your direct testimony the only kind of puffing in existence?

A. I can't say what may be in existence.

X. 24. Can you say what was in existence prior to the alleged invention of the complainant?

66 (Same objection as to cross-question 17, as this inquires of a similar matter.)

A. No; only so far as regards general trimmings of a different character. I know of rufflings, flutings, and gatherings, &c., and I know of some things called puffs, but I know of nothing that bears any special analogy to the puffing described, or that could be said to be puffing in that sense.

X. 25. Suppose the crinkled, gathered, or irregularly-waved surface was not produced simultaneously with the other parts, as mentioned in your direct testimony, but before or after and by a different process; would that make it any the less a puffing?

(Same objection as to cross-question 17.)

A. It would not be the puffing described or made as described; it might be said to be puffing.

X. 26. Look at the exhibit marked "Herrmann & Lautenbach," and notice the shape or configuration of the centre, and say whether you do not notice a regularity in the direction of the waves in that article of puffing.

A. There is in this article a centre line, as I have before described, which breaks an angle and gives a general direction to much of the irregular wavy centre or zone.

X. 27. Do you find that centre line and that general direction of the waves in the article of puffing described in the patent re-issue 3001, introduced in evidence by the complainant?

A. No.

X. 28. Have you seen the article of puffing described in the patent 3001 before and after it had been laundered? And, if so, state what is the difference in its appearance before and after it had been laundered.

(Objected to by complainant's counsel as new matter.)

67 A. I have seen it before and after it had been laundered. It is not as beautiful after it has been laundered as before; its general appearance is the same, if properly laundered.

X. 29. When the article which is patented has been laundered, does it preserve or retain the distinct flutes mentioned as joining the flattened borders, or does it all wash up and assume the form which the ironing will give it by the different modes in which it may be ironed?

(Same objection.)

A. The flutes have more the appearance of gathers, along the stitching of the flattened borders, after laundering.

X. 30. Explain what you mean, not what the specification means, by the words "in the production of," when you say "the invention consists in the production of a new article."

A. I mean the manufacture.

X. 31. Do you mean, or is the invention above alluded to, a new article of manufacture, or the production of a new article?

A. The production of a new article, and of course a new article when produced. You can't have a new article until you make it.

X. 32. Why do you say, not why the specification says—why do you say the invention consists in the production of a new article, instead of the invention is a new article?

A. For the reason last given: you can't have a new article without producing it; and for this further reason, every invention is either a new thing, or a new way of doing a thing, or both, by that rule.

X. 33. Question repeated.

A. And for the additional reason that it is a new article of manufacture, (which, of necessity, means to make.)

X. 34. Then this invention means the making of a new article, as I understand you to say?

68 A. It does.

X. 35. If you are able to do so, will you describe what the invention 3001 is, without the use of the words "the production," or any equivalent words or expression which does not signify the act of producing?

A. It is a piece of trimming having a centre zone, with a crinkled, gathered, or irregularly-waved form, bounded by two rows, one on either side, of regular flutes, and said flutes having plain bands or flattened borders on their outer edges, capable of being stitched, the same single or in duplication.

X. 36. Have you not given the above description by quoting from the patent 3001, with the patent before you?

(It is suggested and submitted by complainant's counsel that this suit being brought for an infringement of the patent 3001, and the question being as to what the invention in that patent is, and the witness being called as an expert with reference to that patent, that he ought, most certainly, in defining said invention to define it from the patent itself.)

A. I have not: the patent lay before me and I examined the requisites of the invention as specified, and used some of the words in the specification.

X. 37. Without the patent before you, if you are able to do so, will you describe what the invention 3001 is?

(Complainant's counsel submits that as the inquiry is as to what is the invention in the patent 3001, that it is manifestly improper to seek the answer of the witness without the patent being before him, if he desires it, for reference; and objection was taken to the question as therefore manifestly improper in the form in which it is put.)

69 A. I think the invention is for a puffed trimming, characterized by two flattened borders or plain bands, with rows of fluting running along on the inside of them, and having a zone of gathered, crinkled, or irregularly-waved surface, made simultaneously and without resort to laundering, by some mechanical device for that purpose; the plain bands or flattened borders being capable of being stitched by hand or machine. Said trimming to be made singly or in duplication, and adapted to shirt-bosoms or other purposes as trimming, as a new article of manufacture, the zone of described irregular surface lying between the two rows of flutes.

X. 38. When you say the invention "consists in the production of a new article of trimming adapted to shirt-bosoms, &c., being distinguished by two plain bands or flattened borders, two rows of fluting within said bands or borders, and lying along by the side of them, which rows of fluting are separated by a zone or space of gathered, crinkled, puffed, or irregularly-waved surface, which is made simultaneously with the other parts, and completed without resort to laundering," do you mean to be understood that it is at all material to the existence of any new manufacture that it is all made simultaneously or completed without resort to laundering?

Adjourned to 10th inst., at 11 a. m.

TUESDAY, *September 10th*, 1872.

Present, counsel as before.

Continuation of the testimony of Samuel P. Kittle.

(Question objected to by complainant's counsel on the ground: First, that it is improper in form; second, that, as put, it is irrelevant, inquiring as to all new manufacture, and how made, and whether such manufactures are connected with the issues in this suit, or otherwise; and because the question is not and does not purport to be confined to any new manufacture described in the "Exhibit, Re-issue 3001," and therefore inquires as to new matter.)

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A. There may be cases of new manufacture where it is not material that all the parts are made simultaneously, where, indeed, it would not be practical; and there are other articles of new manufacture where an important, or the chief advantage, arises from the simultaneous production of all the parts. The existence of a new article of manufacture, whether all the parts are made simultaneously, or whether made by distinct processes or at distinct stages, would remain as a matter of fact; and in that sense it would be immaterial in which way it would be produced. The above would be true in regard to articles that could be laundered.

X. 39. When you say, in answer to question 4, that "the invention specified in the re-issue 3001 consists in the production of a new article," &c., do you mean by the words "the production" to describe the act of producing, so that the sentence could truly read, "the invention consists in the act of producing"?

A. No.

X. 40. If not, can you use any words as a substitute for the words "in the production," in stating what the invention consists of?

(Objected to by complainant's counsel as having been already answered by the witness.)

A. I think I could use the word "form;" that is to say, an article of trimming or puffing formed from muslin or other material, with flattened borders on the outer edges, and rows of regular fluting running inside of the flattened borders on both sides, with a centre of irregular wavy form; same being formed in single rows, or in two or more rows simultaneously, and capable of having the flattened borders stitched,

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all complete, without resort to laundering. Still, I should prefer, in giving a correct description, to use such language as I did in the first place, though I do not regard the use of words as in any degree changing the existence of the facts and of the articles laid before me in the exhibits.

X. 41. Leaving out of your statement of what the invention consists, the words "in the production of," or any equivalent words which mean the act of producing, can you describe the invention? If you can, do so.

A. I think my last answer would be a perfect answer to the present question.

X. 42. Is that the only answer you can give to the question?

A. No; a puffing or trimming, having two flattened borders or plain bands, with regular rows of fluting running along the inside of them, with a zone or space between, of irregular-gathered, crinkled, or wavy-formed surface, the same being in single or duplicated rows, capable of having stitching in the flattened borders, would be the invention, when constituted simultaneously, and without laundering.

X. 43. Does not the invention specified consist in the act of producing simultaneously, except in the stitching?

A. Yes.

Q. 44. Does not one of these things, the making of the parts simultaneously, which, in answer to question 4, you say distinguish this invention, (described in re-issue 3001,) consist of an act?

A. Yes; and it would be difficult to do anything without an act: I think impossible. I might as well say here, (as it is evidently desired to have my opinion given,) that any new article of manufacture requires acts to produce it, and that while the article, as an article, would be a new thing, I am unable, and always have been, to so separate a thing produced from its production as to not have constantly in view, at least in some degree, the act and manner of producing.

X. 45. Do you mean by the words "its production," in your last answer, the manner of producing it?

A. Yes.

72 X. 46. What do the rest of those things which in answer 4 you say distinguish the invention or new article, "two plain bands, &c.," down to "made simultaneously," describe—the form of the article, the beauty of it, or the utility of it: and which part of your answer describes each?

A. All, to both parts of the question.

X. 47. Have you no other answer to make to the last question?

A. I have no better. I might say that the utility of the invention depends on its form and beauty, and its beauty depends on its form and the taste of the observer; that is to say, if it is a merchantable article, it is made so by the approval of the trade or consumers, and if it was not an article of utility or beauty, or believed to be, there would be no object in making it, as there would be no market for it.

X. 48. State what is the form of the new article described in the specification to re-issued patent 3001.

(Objected to as already answered, and answered more than once.)

A. It is an article of trimming or putling, or manufacture, applicable to shirt-bosoms, trimming, or other purposes of dress, made up of either a single row, or two or more series of rows, each consisting of flattened borders, with regular flutes running along their inner edges, with a crinkled gathered portion, or portions of irregular or wavy form between the rows of regular flutes, the same being of indefinite length and capable of having the flattened borders stitched and complete without laundering.

X. 49. That is the only answer to the question at your command?

A. I can't say that. I think it is a good one and ought to be a satisfactory one; probably as good an answer as I can give.

X. 50. Can you or can you not give me a more specific answer as to what the form of that article is?

73 A. I think the patent illustrates and describes the form as clearly as I would be able to. I will state, however, that in my opinion it is not requisite in the production of the article specified that the relative space or surface occupied by the different members or parts of the trimming should be absolutely as illustrated, but only that there should be flattened borders, regular fluting running along their inner edges, and a zone of irregular surface or space, of wavy form, between the rows of fluting; and that the trimming should be capable of being made in duplication simultaneously complete without laundering. The regular parts are the flattened borders and the fluting: and the central portion is not regular, neither is the breadth of the rows of fluting, the flattened borders, or the central irregular wavy portions.

X. 51. Do you regard it as necessary to state how the article is made, as you seem to have done, in order to describe the form of the article?

A. I do not understand that I have described how the article is made, but I first called attention to the best description and illustration of the form, and then cited sundry modifications of form or of the relative parts, which might be made, and still, in my opinion, be the thing described and patented, thereby intending to more fully show my view of what the form of the new article of manufacture was, as regards its form separately considered.

X. 52. State how the article is made after the muslin is ready.

(Counsel for complainant inquires whether the question refers to the process of manufacture set forth in the patents put in evidence in this case, or either of them. Counsel for defendants states that the question is asked of the witness, first, to ascertain whether the witness knows how the article is produced, and to test his capacity as an expert; and, secondly, to ascertain whether his answer in this respect will
74 correspond with his testimony heretofore given; and, thirdly, to ascertain whether he is acquainted with the special matter embraced in this examination, that is, the manner of making the complainant's trimming. Counsel for complainant objects to the question so far as it calls for or seeks to call for anything outside of and beyond the patents put in evidence, as calling for new matter, as not proper and legitimate cross-examination, and as irrelevant in the case.)

A. The one mode specified in the re-issued patent 3001 refers to the machine in re-issued patent 3000. That machine consists of a pair of rollers mounted in a proper frame and provided with annular fluting-meshes and a plain annular central zone, and with narrow annular bands outside of the fluting-meshes; and pressers that are made to bear upon the annular bands. The rollers having these provisions singly or in duplication have a provision for being heated and being revolved. In front of these rollers there is a guide located, having provisions for taking up the breadth, opposite the annular zones, and for passing the prepared muslin, or the material, between the rollers, bands, and meshes, to be acted upon by the parts. The machine being at the proper temperature, the muslin being prepared properly, it is passed into and through, between the rollers, meshes, zones, and plain bands, when it is brought into contact with the pressers that flatten the borders on the outer plain annular bands. The material is taken up in its breadth before entering into the rollers opposite the plain central zone, and it is taken up in its length by the fluting-meshes in its passage, so that there is a surplusage of material in its length and breadth to some extent at the central zone, which is lightly pressed into an irregular or wavy form by contact with the rollers as it passes through. After the trimming thus produced has passed from the mechanism for its production, it is complete for use, without laundering, with the addi-
75 tion of stitching in the plain bands to render permanent the gathering or fluting.

Adjourned to 12th inst., at 11 a. m.

THURSDAY, *September 12th*, 1872.

Present, counsel as before.

Continuation of the testimony of Samuel P. Kittle.

X. 53. State how the machine upon which the new article is made operates on the muslin.

A. It operates in a manner to contract it in length and in breadth, and to give the regular rows of fluting the compressed flattened borders,

and the irregular waved centre, as a complete thing or article, without laundering, and ready for stitching.

X. 54. What part of the machine contracts the muslin, as stated in your last answer?

A. The fluting-meshes in its length, and the guide in its breadth.

X. 55. Are the fluting-meshes and the guide, each or both, necessary or indispensable to make or contract the muslin, as you have stated above?

(Complainant's counsel objects to the question as not admissable under the objection taken by the defendants' counsel to the introduction of the patent 3000 as an exhibit, and the like objection to question No. 3.)

A. I wouldn't like to say that; they both perform that function in the machine referred to in the patent 3001.

X. 56. Is that the only answer you can give to that question?

A. No. With reference to the article patented in 3001, the in-
76 ventor refers to the machine patented in re-issue 3000, and describes one mode of producing that article by said machine, but does not confine himself to that mode of machine alone, but says, "the mechanism, where machinery is used for that purpose, necessary to produce a puffing of this character, may be varied, but for the purpose of illustrating how, or one way in which the same may be done automatically, or by mechanism, it will suffice here to refer briefly to a machine for the purpose, which was secured to me by letters-patent No. 62492 of United States, bearing date February 26th, 1867, and which is now a subject of application for a re-issued patent." Then follows a brief description of the manner of producing this article of trimming; from which specification in said patent, and the operation therein set forth of manufacturing said goods, I have given the answer 53, and subsequent answers.

(Defendants' counsel objects to the answer as not responsive to his question. The question was not what the patent described, but, "Are the fluting-meshes and the guide, each or both, necessary or indispensable to make or contract the muslin, as you have stated above?)

X. 57. I now ask you whether, in your opinion, the guide and the fluting-meshes, or each or both, are necessary or indispensable to make puffing, or contract the muslin, as you have stated above?

(Counsel for complainant inquires whether by the words "the guide," in this question, is meant a guide of the specific form, construction, and arrangement described and shown in the re-issue patent 3000, or whether such words are used as meaning a guide which serves to take up the muslin in breadth. Defendants' counsel states: I mean by the words
"the guide," whether, first, a guide such as described in the pat-
77 ent, or substantially such as is described in the patent, or, second, whether any guide is necessary to be used in combination with the other parts of the machine, as patented, to produce the article of puffing mentioned.)

A. Yes; I think it is necessary.

X. 58. Does that answer apply as well to the fluting meshes as to the guide?

A. Yes.

X. 59. You think then if the fluting-meshes were absent from the machine, patented No. 3000, the article or puffing as described could not be made; do you?

A. Not without a substitution of a mechanical equivalent.

X. 60. Can you describe what would be a mechanical equivalent to the fluting-meshes described in the patent 3000?

A. A devise for the same purpose, operating substantially in the same manner, and producing a like result.

X. 61. Can you give me a more practical answer to the above question by stating one or more examples of an equivalent, or what would be an equivalent to the fluting meshes?

(Objected to by complainant's counsel because it is not the duty of the witness to specify for the benefit of counsel what device may be or may not be equivalent of mechanism described in a patent; and that if defendants' counsel wish the opinion of the witness as to whether particular devices may be equivalent, the counsel should specify and describe equivalents, and then ask the witness whether they are equivalents.)

A. I conceive of various shades of difference, but have no definite modification or alteration of construction in my mind, sufficiently clear to delineate the same satisfactorily to myself. I would like to be
78 helped by the production and comparisons of models, and drawings of a modified character of the parts inquired about.

X. 62. When you say the inventor does not confine himself to any special machine, or contrivance specified for producing the goods, do you mean to be understood that in your opinion the puffing in which the crinkled portion is such as would be formed without an arched guide, taking in an excessive witdth of material, would be the puffing described in the re-issued patent 3001?

A. Yes.

X. 63. You mean to say, then, by your last answer, that any article of puffing having a crinkled portion in the center, whether made by the use of an arched guide or without it, or without its equivalent, or whether made by machinery or hand, would be the puffing described in re-issued patent 3001?

A. No; not unless you add all the parts therein described in their due relation as set forth, which being the case, then, I say yes.

X. 64. Then you do not adhere to your answer to question 62?

A. Yes: I understood you then to be inquiring more specifically in regard to the puffing as described in the patent. In your last question I did not understand you necessarily to be confining yourself to the same specifically described puffing.

X. 65. You think, then, that any article of puffing made with an irregularly-waved surface in the center, with rows of flutes on each side, with flattened borders stitched, whether the same is made by hand and by laundering, would be the puffing described in patent 3001?

A. No; I don't think that.

X. 66. You say the inventor does not confine himself in patent 3001 to the machine specified for producing the article, so long as the manufactured article contains certain requisites, (see answer 4.) Do you mean that if the manufactured article does not contain them that the inventor does confine himself to the machine specified?

A. No.

79 X. 67. What did you mean by the qualification "so long as, &c.," down to the words "flattened borders," at end of the period?

A. I mean the puffing specified, described, and illustrated in patent 3001 is for a new article of manufacture characterized by flattened borders, and inside of each border having a regular row of fluting; the rows of fluting being separated by an irregularly-waved, crinkled, or gathered zone or space, complete and ready for stitching in the borders, and without resort to laundering, when adapted to shirt-bosoms,

or trimming, or articles of dress. And I do not mean to be understood that in the production of such article the inventor necessarily confines himself to any specified machine or device at all, but simply cites one way of producing it.

X. 68. Do you know what ruffles are as an article of dress or trimming?

(Objected to as new matter, and as not within the proper line of cross-examination of the direct testimony.

A. I think I do.

X. 69. Please describe what a ruffle is, and how it is constructed.

(Same objection.)

A. It is a piece of material having one edge somewhat regularly gathered and secured, so as to make it shorter in its length than the opposite edge.

X. 70. Is that the only shape of ruffle you know anything about?

(Same objection.)

A. I think that describes what passes for ruffling in common parlance. I haven't gone into close examination of the technicalities of the word ruffle. There may be other constructions or formations that can be properly called ruffles.

80 X. 71. Have you ever seen and examined many diffierent kinds of ruffles, constituting articles of dress, or dress-trimming?

(Same objection.)

A. I presume I have.

X. 72. Were they different construction: and, if so, what way different?

(Same objection.)

A. In the manner of the gathering or pleteing, in the material used, in the edging and binding, in the fullness and regularity of the gathers or plaits, in the breadth and finish, in the duplication or singleness.

X. 73. Describe more specifically what you mean by your last answer, by different kinds. Do you mean different patterns or shapes, or are all that you have seen of the same pattern or shape?

(Same objection.)

A. All have the characteristics specified in answer 69, so far as I remember. The differences are indicated in answer 72: I do not think at present of any other special difference.

X. 74. Did you ever see what is called "the pointed ruffle?"

(Same objection.)

A. Yes: I referred to that in one of my answers by the words "edge," or "edging."

X. 75. Are you acquainted with flutings, and for how long?

A. I think I am, since I can remember.

Adjourned to 16th inst., at 12 m.

81 NEW YORK, *Monday, September 16th*, 1872.

Present, counsel as before.

Adjourned to 19th inst., at 11 a. m.

THURSDAY, *September 19th*, 1872.

Present, counsel as before.

Adjourned to 20th inst., at 11 a. m.

FRIDAY, *September 20th*, 1872.

Present, counsel as before.

Adjourned to 23d inst.

MONDAY, *September 23d*, 1872.

Present, counsel as before.

Since the last taking of testimony in this case, a stipulation has been made in this cause, and in two other causes brought by the same complainant against Alexander Lyle, and against Robert Werner, in relation to the testimony in such suits; a copy of which stipulation is now put in evidence, and marked "Exhibit, Stipulation, Sept. 19th, 1872, R. E. S., Ex'r," and reads as follows, viz:

82 Circuit court of the United States for the southern district of New York.

GEORGE E. KING
vs.
ADOLPH HERRMAN AND SIMON LAUTENBACH.

GEORGE E. KING
vs.
ALEXANDER LYLE.

GEORGE E. KING
vs.
ROBERT WERNER.

It is hereby stipulated by and between the parties to the above suits, and their respective solicitors, that the testimony offered in any one of the said several suits may be taken and entitled in all of the said several suits, so that it need be but once taken; and that on the examination of experts and other witnesses in said several suits, the "Werner" machine, so called, shall be produced by the defendants' counsel; and that such testimony shall be read and used on final hearing in each of said suits, as if taken only in such suits; and, if the defendants' coun-

83 sel desire, the complainant agrees to produce for the inspection of the defendants' counsel and experts one of the machines now used by the complainant in his business, and also to permit the defendants' counsel and experts, if they desire, to see the working of such machine at the complainant's place of business.

And it is further stipulated that the complainant have until and including the first Monday of October, 1872, to take his evidence in support of the bill in said several suits, and that the defendants have until and including the fifteenth day of November, 1872, to take their evidence in defence in said several suits, and that the complainant have until and including the fifteenth day of December, 1872, to take his evidence in reply in said several suits, and no further evidence shall be taken in either of said suits, unless by agreement of the parties or by leave of the court first obtained on motion for cause shown; and that the defendants have the right to put in, in said several suits, all the letters-patent granted to complainant, and the invention and application for patent by William Weidling, and the file-wrapper; and the patent granted to Caroline Weitling and William C. McIntire on the 27th day of August, 1872, and the file-wrapper; and the Werner invention and application for patent not yet granted, and Werner patent, if granted before the testimony closes, and Werner's patent already granted, and the file-wrapper, with the same effect as if such invention, patent and application, &c., had been set up in the answers in said several suits; and said answer shall be considered amended in this respect, and further amended so that any defence set up in the answer in any one suit shall be available in each of the other suits; the Werner caveat to be produced if the complainant de-

sires; and that the suits and each of them may be noticed for final hearing and placed on the calendar for the next October term of this court; and that the motion for injunction in the first of said suits be suspended until the hearing of said suits at said October term, with right to complainant to make a new motion for injunction in said suits or either of them, if said suits are not argued during said October
84 term; and on decision being made in either or all of said suits decrees may be entered therein according to such decision, except that no account of profits or recovery therefor of damages shall be ordered by the decrees in the suits of Lyle and Werner, but one dollar in the case of Lyle and in the case of Werner shall be adjudged as the damages and profits; and either defendant may enter up the decree in his suit, so that there may be a prompt appeal, no stipulation herein contained to prevent application for suspension of injunction (if injunction ordered by decree) in case of appeal.

The testimony already taken in the first of the above-entitled suits shall be considered as if taken under this stipulation, and printed copies of all the testimony taken in said suits shall be filed in each of said suits and be of the same force and effect as the original testimony.

Dated New York, September 19th, 1872.

M. A. KURSHEEDT,
Solicitor for Complainant.
ORLANDO DORSEY,
Solicitor for Defendants.

Counsel for complainant suggests the suspension of the further cross-examination of the witness Kittle, for the purpose of continuing his direct examination under the spirit and meaning of the said stipulation of September 19th, 1872, with respect to the said Lyle and Werner suits.

Counsel for defendants consents to the suspension of the further cross-examination of the witness, for the purpose above set forth, cross examination to be resumed at the close of the direct examination.

The said stipulation of September 19th, 1872, providing that the testimony offered in any one of the said several suits of King vs. Herrmann and Lautenbach, of King vs. Lyle, and of King vs. Werner should be taken and entitled in all of the said several suits, counsel for the said several parties request the commissioner to enter in the record at this point the title of said several suits.

85 The commissioner enters such titles as requested, which are as follows:

GEORGE E. KING
vs.
ADOLPH HERRMANN AND SIMON LAUTENBACH.

GEORGE E. KING
vs.
ALEXANDER LYLE.

GEORGE E. KING
vs.
ROBERT WERNER.

Counsel for complainant puts in evidence a specimen of trimming, which is marked "Complainant's Exhibit, Alexander Lyle, R. E. S., Ex'r."

Defendants' counsel admits that the said exhibit is a specimen of trimming sold by Alexander Lyle, the defendant in one of the above-entitled suits, previous to the commencement of said suit.

There is also put in evidence a model machine, which the commissioner is requested to mark "Exhibit, Werner Machine, R. E. S., Ex'r," and it is admitted by the defendants' counsel that a machine like said
86 exhibit was used by Robert Werner, a defendant in one of said suits, previous to the commencement of said suit, and that upon or by such machine was made the trimming sold by the defendants in the other suits, marked "Exhibit, Herrmann & Lautenbach," and "Exhibit, Alexander Lyle."

S. P. KITTLE, having been sworn in said two suits of King vs. Lyle and King vs. Werner, is further examined on part of the complainant in said several suits:

Q. 76. Please look at the trimming now shown you, marked "Exhibit, Alexander Lyle," and refer to your testimony heretofore given with respect to the trimming marked "Exhibit, Herrmann & Lautenbach," and state whether the said "Exhibit, Alexander Lyle" is the same or substantially the same with the said "Exhibit, Herrmann & Lautenbach," and whether your statement heretofore given as to said "Exhibit, Herrmann & Lautenbach," apply to said "Exhibit, Alexander Lyle," or otherwise.

A. I have looked at the "Exhibit, Alexander Lyle," and compared it with the "Exhibit, Herrmann & Lautenbach" and have read the testimony heretofore given in regard to "Exhibit, Herrmann & Lautenbach." The exhibits "Herrmann & Lautenbach" and "Alexander Lyle," referred to in the question, are substantially alike, differing only in the material used and the "Exhibit, Alexander Lyle" being duplicated in the piece. I think my testimony before given in regard to the "Exhibit, Herrmann & Lautenbach" will apply with equal truth and fairness to the "Exhibit, Alexander Lyle," only so far differing as that testimony referred to the trimming in "Exhibit, Herrmann & Lautenbach," being partly made up in a shirt-bosom.

Q. 77. Please look at the machine marked "Exhibit, Werner Machine" and examine the same in connection with the patent marked "Exhibit, Re-issue 3000," and state whether in your opinion said machine contains the invention described and claimed in said re-issue, and give your reasons for any opinion you may express.

87 A. I have looked at the machine marked "Exhibit, Werner Machine" in connection with the patent marked "Exhibit, Re-issue 3000."

The machine specified and illustrated in the last-named exhibit is an invention for making puffing applicable to shirt-bosoms, trimming, or other purposes of dress. The object of the inventor seems to have been to afford a mechanism by the employment of which he could produce at one operation what had required or might require several operations to produce when other means were employed. The characteristics of this machine described in the patent 3000 consist in the employment of fluting-rollers on an ordinary stand, one above the other, having a means or device for revolving the same. Said rollers are provided with fluting-meshes, plain bands, and a central zone lying between the fluting-meshes, the plain bands being outside of the fluting-meshes. Back of the rollers is mounted a horizontal bar or bracket, with set-screws opposite the plain bands, and between the rollers adapted to the plain bands are smoothers or pressers, one for each pair of the corresponding bands

on the rollers; which pressers or smoothers are adjusted in their force or pressure by set-screws in the horizontal bar before referred to. In the front of the fluting-rollers is a table or plate mounted upon a bracket, which is secured to the frame and sustains an instrument or device which is termed a guide; the chief office of the guide is (by its curved or arched portions) to take up the material in breadth, as it is fed through it into the fluting-meshes and passed through the machine. The office of the fluting-meshes is to produce regular rows of fluting by contracting and bending the material between the cogs or meshes. The office of the plain bands outside of the fluting-meshes is to afford a table or surface on which the material as it passes through the meshes and by them is gathered or shortened in its length, may be smoothed or flattened down by the aid of and in conjunction with pressers or smoothing devices for that purpose, which pressers are located over the bands and operated by set-screws in a horizontal bar, which is mounted on a
88 frame in the rear of the rollers. The office of the plain zones (while they leave an open space to allow the material taken up in its breadth by the arched guide and shortened in its length by the fluting-meshes) is to freely pass the material being acted upon by the other parts, and at the same time slightly press it, or cause the material to take by such pressure an irregular form. I should have said in the beginning that this machine, constructed as above and operated as stated, is provided with means for heating the parts acting upon the material, so that in its passage it will be more or less dried and finished when passed through the machine. The inventor claims the guide constructed with one or more curved arched portions in combination with fluting-rollers.

Now I find in "Exhibit, Werner Machine" fluting-rollers mounted in a frame, one above the other, as in re-issue 3000, having plain zones, fluting-meshes, and plain bands, with provisions for heating the rollers and revolving them. I find a horizontal bar having set-screws located opposite the plain bands. I find in the rear of the rollers and under the set-screws last referred to pressers or smoothers adapted to and made to act upon and over the plain bands. I find in front of the rollers brackets secured to the frame, with a plate or table for mounting and sustaining a guide, which in its action tends to take up or increase the breadth of the material opposite the plain zones. In the "Exhibit, Werner Machine," the object of the frame is to mount the rollers one above the other so that they will revolve together, the same as in "Exhibit, Re-issue 3000." The provision for heating is found in both exhibits alike. I find on the frame the horizontal bar in the rear of the fluting rollers, with the set-screw, substantially the same in both exhibits.

I find the flattening or smoothing devices located and constructed substantially the same in both exhibits, the purpose and operation of all these parts being substantially identical. The difference in the parts consist', first, in the "Exhibit, Werner Machine," the plain zones on their surface are parallel to the axis of the cylin-
89 ders in their full extent or breadth, while in the "Exhibit, Re-issue 3,000," they are bent or curved at the edge next to the fluting meshes, as illustrated by drawing. In the "Exhibit, Werner Machine," the taking up in the breadth opposite the plain zone is accomplished by a pressure-toe bearing upon a plate or table, the object or purpose of which is evidently to retard or resist the feed or action of the fluting-meshes sufficiently to bend the cross-threads of the material, so as to accomplish the taking up of the breadth; at all events that would be the effect of the pressure-toe on the material, as it is fed

into and between the fluting-meshes. This pressure-toe is governed in its action by a set screw on a bar extending out in front of a cross-tie or loop, which I mark A, secured to *to* the table, and under and through which the material is fed into the machine. Back of the above cross-tie, and secured to the table, is a bow or entrance-guide, standing vertically above the table. I see no special advantage arising from the employment of this last bow or guide, as the material could be entered with equal facility between the cross-tie and the table, which would give direction to the material, and the bar being secured over the pressure-toe and into the cross-tie, having a set screw at its extremity near the rollers, acts in part to vary the pressure on the toe and through it on the material as it passes over the table and into the rollers. I will here state the cross-tie is supported on the table by brackets of equal horizontal breadth, and fastened by long keys passing through studs, which project up through the tie from the table beneath; this construction prevents any tilting of the cross-tie, and affords a degree of pressure of the desired strength, by means of set screws in the bar, which projects out in front and near the rollers. I cannot see that this alteration or modification of the guide in the "Exhibit, Werner Machine" is substantial, or more than a mechanical change, its purpose being the same as the purpose of the guide in "Exhibit, Re-issue 3000," and its action being the same, to wit, to receive and pass the goods to and into the rollers, and at the same time take up the breadth of the material
90 at and opposite the plain zones and between the fluting-meshes. To be sure, this acts to bend the horizontal line or threads of the material to a horizontal angle and so take up the breadth; whereas in the "Exhibit, Re-issue 3000," the guide bends the material from a horizontal to a vertical arched or angular line. The simple fact of the variation in the direction of the bend I do not regard as a substantial difference. The machine, "Exhibit, Werner Machine," as organized, is capable of a duplication in one frame, the same as described in "Exhibit, Re-issue 3000." And the "Exhibit, Werner Machine" will produce a trimming having flattened bands, with regular rows of fluting on their inside, and irregular wavy centre zone between the regular flutes, complete without laundering, and ready for stitching in the flattened bands, the same as the machine described in "Exhibit, Re-issue 3000," with the exception of a centre line or crease which would be made by the pressure-toe in the "Exhibit, Werner Machine." The Werner Machine would evidently produce smaller puffs than the machine described in "Exhibit, Re-issue 3000," but these differences I do not regard (as before stated) as material or substantial. I will state that I find in the "Exhibit, Werner Machine," in the rear of the machine, a horizontal bar at the base of the frame, on which are mounted what I would term three clearers, one for each flattened band and one for the centre zone. The clearer for the centre zone is turned upon its edge, and runs around a section of the plain zone of the lower roller, for the purpose evidently, of clearing the crinkled portion and raising the centre of the puffing as it passes from the rollers. I do not find any analogous device for the last-mentioned clearer in the "Exhibit, Re-issue 3000," except so far as the guide raises the centre, like this clearer.

Adjourned to 26th inst., at 11 a. m.

91 THURSDAY, *September 26th*, 1872.

Present, counsel as before.

Continuation of the testimony of Samuel P. Kittle.

Q. 78. In your last answer, in describing what you find in the Werner machine, you say in one place that you find sustained on the table in front of the rollers "a guide, which in its action tends to take up or increase the breadth of the material opposite the plain zones;" and subsequently, in the same answer, you say, in the "Exhibit, Werner Machine," the taking up in the breadth opposite the plain zones is accomplished by a pressure-toe; do you by such words "guide and pressure-toe," refer to one and the same device, or different ones?

A. I refer to the same device. The word "pressure-toe" has reference to the bearing part, which in combination with the table acts to contract the breadth of the strip and increase the amount of the material lying between the annular rings fluting-meshes as the material enters them. The table performs the function that the lower portion of the guide E in the "Exhibit, Re-issue 3000" does, and the pressure-toe, the function of the arch portions.

Q. 79. Do you wish to add anything to the statement in your last answer as to the part of the Werner machine, called by you the bow or "guide," and located *break* of the cross-tie A, as to which you say you see no special advantage arises from its employment?

A. I will simply state that I meant to be understood that there was no advantage that I could see in the bow as a guide, or as a part of a guide; that while it might be considered as a means of giving direction to the entrance of the strip of material to be operated upon, I saw no utility in it as a part of a guide. I am informed by the inventor, Mr Werner, that its office is simply to straighten the material in its breadth and length, as it passes up over it and down under the bar A, and that it has no other purpose or use.

92 Q. 80. Please look at what you call the clearer for the central zone of the Werner machine, and which is placed in the rear of the machine, and state whether the upper edge of such clearer, between the pressure that made the flattened borders, projects any above the horizontal line of the top of the fluting-meshes on the bottom roller; and, if so, about how much, compared with the depth of the fluting rollers. And will you please mark on the model this central clearer B?

A. I have marked such central clearer, (B.) I should think the top edge of the clearer at the highest point was about as much above the top of the fluting-meshes on the lower roller as the plain annular surface are below.

Q. 81. In such "Exhibit, Werner Machine" do you find upon or connected with the pressers or smoothers, as you call them, (and which please mark C.) any part or projection which extends over the rings of flutes between the central zone and the flattened borders of the lower roller?

A. I have marked the pressers, (C,) and each one has a portion extending over the rings of the fluting-meshes to the edge of the plain central zone.

Q. 82. What, in your opinion, would be the action of such elevated clearer B, in combination with such extending of the pressers C over the flutes, as found in such Werner machine, upon the trimming produced by such machine?

A. The clearer B would evidently act to restore a perfect surface,

where the pressure-toe or guide had marked or marred the material in taking up or increasing the breadth of the same; this would be the fact more particularly in view of the smoothers or pressers C being in contact with and pressing down the material to and on to the annular plain surface. I think the effect of this raised portion of the clearer B, operating in conjunction with the pressers C, as stated, and in conjunction with the plain zone on the roller above, would be to give a puffed centre to the trimming produced, more nearly resembling that described and illustrated in patent "Exhibit, Re-issue 3001."

93 Cross-examination of the witness resumed by Mr. Dorsey, counsel for defendants.

X. 83. Did you never see an article which was known and called a puffing prior to 1860?

A. I think I have.

X. 84. Do you not know that you have?

A. My recollection is that my grandmother used to have a cap with what she called puffing in; that is among my earliest recollections. And I remember also, among my early recollections, sleeves that were in fashion called puffed sleeves, which the ladies wore. This puffing was below the joining of the sleeve to the waist of the dress, at the shoulder. I have these recollections somewhat distinct, and yet I do not remember distinctly of ever seeing or knowing of a trimming, sold in market as a trimming or puffing, prior to the time my attention was called to this subject, in a former trial upon the patents sued on in this case.

(Counsel for defendants suggests to the witness to make his answers to his questions as responsive as possible; only that, and nothing more.)

X. 85. What time was it your attention was first called to puffings?

A. About the time the suit was commenced between King and one Mandlebaum, in this court in 1868.

X. 86. You never knew anything about what is known as puffing before that time, did you?

A. I can't say that. Of the specific puffing then in controversy I don't remember having any special knowledge, although I may have seen it and known of it before.

X. 87. Had you any knowledge of any other kind of puffing in contradistinction to what in your last answer you call the "specific puffing?"

A. No special knowledge, any further than what I have stated in my answer to the 84th question, or something of that nature.

94 (Complainant's counsel admits that trimming called puffings were made and used prior to the time of the invention described in the patents re-issues 3000 and 3001.)

X. 88. Were the puffings you saw as used by your grandmother like puffings patented by this complainant? Answer categorically, yes or no.

A. No.

X. 89. In your answer to cross-question 25, you say it would not be the puffing described or made as described; it might be said to be puffing. Why should it not be the puffing described?

A. Because it would lack the simultaneous production and the completeness and finish that would naturally appear in consequence, and it would be the result of several or successive operations.

X. 90. Is that the only reason?

A. The only reason I think of at present.

X. 91. In your answer to cross-question 35, you described the invention 3001 as follows: "It is a piece of trimming having a centre zone

with a crinkled, gathered, or irregularly-waved form, bounded by two rows, one on either side, of regular flutes; and said flutes having plain bands or flattened borders on their outer edges, capable of being stitched, the same singly or in duplication." As thus described, does the puffing differ from puffing before known, except in form?

A. I don't pretend to know what may have existed before, and could not therefore state.

X. 92. In what respect do any puffings that you have ever seen differ one from the other. I speak of puffings so known and regarded by persons buying and selling or using them for purposes of dress-trimming or ornament?

A. I remember of the ladies wearing their hair in rows of puffing many years ago; that differed from the puffing described in "Exhibit Re-issue 3001" in not having regular fluting and plain borders. I remember also of a puffing made in the dress sleeve, at the wrist,
95 stitched on to a plain sleeve on one side, and a ruffle on the edge about the hand; that had no regular rows of fluting nor regular flattened bands. I remember also of pieces of material being gathered at both edges and laundered into puffing in the centre, and stitched on to flounces and other parts of dresses; but in none of these cases, nor of none of those that I remember, was the central portion of the trimming or puffing bounded by regular rows of fluting on both sides, with flattened bands outside of the rows of fluting. Neither do I remember of any such puffs or puffing having been sold in the market, or manufactured, competely ready for use without laundering.

X. 93. Did you never know what was called puffing used in shirt-bosoms? And, if so, state whether it was before the year 1860.

A. I think I have known of what might be termed a puffing used in shirt-bosoms; I won't undertake to state the date when I saw it first.

X. 94. State whether or not you saw puffing used in shirt-bosoms any time before 1861.

A. I cannot now.

X. 95. Before 1860, did you never know of a puffing made by hand that could be described as an answer to cross-question 35?

A. No.

X. 96. Look at the paper marked "Standard Puffing, September 26th, R. E. S., Ex'r," and state whether you recognize in the patterns marked from 1 to 13, inclusive, what is called puffing.

A. Yes.

X. 97. State how long back you can remember of having observed or seen puffing of the description illustrated in the "Exhibit, Standard Puffing" patterns, from 1 to 13?

A. I can't state when I first saw such puffing; it may have been eight, ten, fifteen, or twenty years, or even more. My impression is that it may have been more than twenty years since I first saw it. Puffing in
96 single lines, like this, indeed, viewed in that way, (I mean single lines,) it may have been forty years or more; for I think a single line of this puffing is just about what my grandmother wore in her cap.

Adjourned to 27th inst., at 11 a. m.

FRIDAY, *September 27th*, 1872.

Present, counsel as before.

Continuation of the testimony of Samuel P. Kittle.

X. 98. Do you consider that puffing of the same kind, made in single rows, and also in two or more rows, have different characteristics and constitute different puffings simply from the fact that they are made in more than one row?

A. The fact of simply duplicating I do not think would make any difference in the article.

X. 99. Do you consider puffing an article of manufacture?

A. Yes.

X. 100. Do you consider the puffing shown you in "Exhibit, Standard Puffing, September 26th, R. E. S., Ex'r," an article of manufacture? (Objected to by complainant's counsel, for the reason that the inquiry is a matter of law, to be determined by the court, and not by this or any witness.)

A. When goods are made as illustrated in the exhibit, they are certainly articles of manufacture.

X. 101. What do you mean by illustrated?

A. Pictured as in these figures.

X. 102. Look at the two exhibits, marked "A" and "B," September 27th, 1872, and state whether or not they are puffing.

A. They are.

X. 103. For how long since have you seen puffing of that kind?

97 A. I think about four years.

X. 104. Look particularly at each of those exhibits, and state whether you have not seen similar puffing before that time.

A. These puffings—Exhibits A and B—have some of the characteristics of puffing that I have known for a long time—ten or twenty years—and some of the characteristics of puffing that I have known more recently. They are not altogether like either of these kinds. I could not say that I have known these puffings more than three or four years, or puffings like these.

X. 105. State what are the characteristics in these exhibits that are in common with puffings you have known for a long time, and what are the characteristics of those you have known for three or four years.

A. In Exhibit A the full centre and gathered edge is that which I have known for a long time. The full centre and gathered edge, with the flattened border or band stitched, bear a strong resemblance to puffing that I have known more recently; so does the duplication of the same. In Exhibit B the same facts exist, with the exception, I have not known much about puffing in the same state this is in regard to its uncleanness and want of laundering.

X. 106. Now state whether both or either of those exhibits have any resemblance, or strong resemblance, to each other or to the puffing described in patent 3,001.

A. They have a resemblance to each other in the gathering. I think the gathering in Exhibit B is more regular than that in Exhibit A. They resemble each other in the stitched borders adjacent to the puffed centre. And were Exhibit B washed and starched and done up the same as in Exhibit A, the resemblance would be still stronger. This would be particularly true were it stitched to a fabric on each side. However, I am inclined to think that the gathering and the edges of

the puffed centre in Exhibit A may have been done by hand, and not by fluting-rollers; whereas in Exhibit B I am quite certain it was
98 done by regular fluting mechanism. Both of these exhibits are in some particulars like the trimming or puffing described in the patent re-issue 3001. For instance, Exhibit A has very much the same appearance the two rows of the patent puffing (Ex. 3001) would have after it had been washed, starched, and done up by hand or laundered; and Exhibit B has very much the same appearance that two rows of the trimming patented in "Exhibit, Re-issue 3001" would have in a very dirty and mussed state, and very much in need of laundering. They are both, in my opinion, unlike the trimming, as an article of manufacture, illustrated and described in the patent "Exhibit, Re-issue 3001," neither of them having the appearance of that trimming, in that neither of them have the regular rows of flutes on either side of the puffed centre, which flutes are laundered or have on their outside flattened borders complete and ready for stitching without resort to laundering, produced by mechanical means simultaneously.

X. 107. Do you regard the difference that you have mentioned in these exhibits as existing between each other, A and B, as the difference in form or shape only?

A. Oh, no; if I were to speak of the value of the two articles, I would say Exhibit A was of considerable value, while Exhibit D, in its present state, would be of no value further than for rags; I mean in the piece. The laundering makes the difference in the value to one dealing in the goods, or one using the goods, who had any neatness about them. Of course the form is affected materially by starch and laundering. As regards the regularity of gathers, I have before given my view on that, and also on the fact that one represents a trimming not only laundered but partly made up. If your inquiry goes to the simple question whether they are gathered and stitched alike, I will state they seem to be quite similar.

X. 108. You recognize both of these exhibits—A and B—as puffing, do you not?

A. Yes.

X. 109. Then, confining your answer to the difference that may
99 or may not exist between the Exhibits A and B, simply as articles of puffing, do you regard the difference that you have mentioned as a difference in form and shape only?

A. I think so, waiving utility.

X. 110. Regarding Exhibits A and B as articles of puffing only, and the article patented, No. 3001, as an article of puffing only, is the difference between the Exhibits A and B and the puffing described in patent 3001, as mentioned by you in your answer to the 106th question, a difference in form or shape only?

(Objected to by complainant's counsel, as it assumes as the basis of the difference inquired of, that the article patented in re-issue 3001 is a puffing only, whereas, as a matter of fact, that is not the case. The question, therefore, requires the article patented to be treated for something it is not; and the comparison based upon such erroneous description of the article patented is not only irrelevant, but an improper subject of inquiry.)

A. No; because the puffing in the "Exhibit, Re-issue 3001," while it might with equal propriety be called a fluting, the fluting existing as distinctly as the puffing, it requires a different mechanism to produce it; and then again the Exhibit B is devoid of the starch or stiffening; and the Exhibit A has the addition of the binding fabrics; and both

have the stitching in, which stitching need not exist in the trimming described in the patent referred to.

Besides, it seems to me that there enters in a necessity of a peculiar construction for taking up a strip of material in both its breadth and length in a given manner, as well as in form. In the article specified in the "Exhibit, Re-issue 3001," is taken up differently from what appears in the two Exhibits A and B.

X. 111. Is there any difference between an article of fluting and an article of puffing when the material is the same, except in the form, shape, or configuration produced by one or the other?

100 A. Yes; there has to be in a given breadth of puffing, when completed, a greater breadth of material than would be required to make the same breadth of fluting, so that there would be an increased amount of material in the puffing complete of a given breadth over the same amount of material of the same breadth of finished fluting.

X. 112. Is that the only difference?

A. I think so; it is the only difference I now think of.

X. 113. Does the simple process of fluting or puffing in any manner change the nature of the material fluted or puffed?

A. I think the nature of the material will not be changed; still, in the employment of the ordinary fluting rollers, I think the tendency would be to elongate, to some extent, the centre longitudinal line of the material, or stretch out, by the pressure between the meshes, the length, while the flutes were being formed, which contract the finished length; and that difference would also exist in addition to the difference given in my last answer; that is to say, we have fabric known as round thread and flat thread fabric. The flat thread is subjected ordinarily to pressure, to produce greater breadth and greater length for a given weight of fabric; and the fluting meshes would tend to flatten the cross-threads in their pressing action, which would not be the case where that pressure did not exist, as in the case of puffing.

X. 114. Is not the pressure spoken of in your last answer made for the purpose of shaping or forming the material into the shape or configuration desired, in either the fluting or puffing?

A. No; in the case of puffing, separately considered, that pressure is not required or employed, as in the case of fluting.

X. 115. Is not the pressure spoken of in your last answer but one made for the purpose of shaping or forming the material into the shape or configuration desired in fluting?

A. Yes.

101 X. 116. Is not the greater breadth in the material taken up in the puffing when completed, as mentioned in your answer to the 111th cross-question, thus taken up for the purpose of giving the puffing the shape or conformation desired in the article of puffing?

A. Yes.

X. 117. Then I understand you to say, that the material being the same, puffing and fluting only differ in their shape or conformation; one shape being known as fluting, and the other shape being known as puffing?

(Objected to, as it does not appear that the understanding of the counsel is derived from the witnesses' testimony already given; and if the question means that such understanding is derived from such testimony, then the question is objected to as assuming a conclusion not warranted by the testimony.)

A. Waiving the above specified differences in several of my last preceding answers, I answer, yes.

X. 118. I now ask you, whether all descriptions of puffing, simply considered as puffing, the material in each case being exactly the same, whether of muslin or linen, do not differ only in their shape, form or configuration, one from the other?

A. Yes, when alone considered.

X. 119. I now ask you, whether or not all fluted puffings, simply considered as fluted puffing, the material in each case being exactly the same, whether of muslin or linen, do not differ only in their shape, form or configuration, one from the other?

A. I can't say that; there may be fluted puffings I don't know anything about.

X. 120. As far as you are acquainted with the article of fluted puffings, is not that the case?

A. I do not think now of any fluted puffing but such as have been presented in the exhibits of this trial, and a preceding trial under these patents, (I mean the Mandlebaum case,) in all of which cases, I think the conformation was the chief difference; I won't say the only difference, without further reflection and information.

102 X. 121. You know of no other difference now, without further reflection or information?

A. I think of none.

Adjourned to 28th, at 11 a. m.

SATURDAY, *September 28th*, 1872.

Present, counsel as before.

Continuation of the testimony of Samuel P. Kittle:

X. 122. Look at this article of puffing, marked "Def'ts' Exhibit C, Sept. 28, 1872, R. E. S., Ex'r," and state whether you recognize it as a style of puffing; and if so, for how long?

(Complainant's counsel objects to this and all previous questions by defendants' counsel, on the cross-examination of the witness, having reference to differences between puffings and flutings, as such, and differences between different kinds of puffings and flutings, and all questions having reference to the state of the art before complainant's invention, as not being proper subjects for cross-examination, under the direct examination of the witness; and the same objection is also now taken as to any future inquiries which may refer to the same subject, or be of the same character; and as to all such testimony, the witness will be regarded as the witness of defendants, and not complainant's witness. Defendants' counsel reserves his right to object to the above, on the general rules of evidence applicable to issues of this kind.)

A. It is a style of puffing. I have known of it about forty years.

103 X. 123. Will you look at defendants' Exhibit C, and state whether or not, as it now appears, it cannot in some places be stretched laterally?

(Same objection by complainant's counsel as to question 122.)

A. It can.

X. 124. Look at page 10 of Exhibit D, and state what style of trimming you consider that to be around the neck of the Earl of Middlesex, in 1645.

(Complainant's counsel objects to this question, first, on the same ground as to question 122; and secondly, on the ground that the book referred to, Exhibit D, is not mentioned in the answer in either of these suits, and is new matter outside of the defendants' pleadings.)

A. Plate opposite page 10 of the exhibit has illustrated a ruffling

worn about the neck of a likeness of one purporting to be the Earl of Middlesex, O. B., 1645.

The ruffling is a trimmed or edged ruffling of compound fold.

X. 125. Please go on and look opposite pages 12, 20, 24, 36, 432, 502, and 618, of Exhibit D, and opposite page 710 of Exhibit E, and state what descriptions of fluting, puffing and ruffling you there discover.

(Same objection by complainant's counsel as to question 124.)

Adjourned to 30th inst., at 11 a. m.

MONDAY, *September 30th*, 1872.

Present, counsel as before.

Continuation of the testimony of Samuel P. Kittle:

101 A. Opposite page 12, the ruffling is very similar to that opposite 10, being an edged ruffling or ruche; the same is true of the ruffling about the neck, opposite page 20; likewise opposite page 24; there is a similar ruffling about the wrist, opposite page 36; there is a ruche or ruffling of a plainer character, opposite page 36; ruffling about the wrist, in the cut opposite page 432, with band and puffing above the ruffle; ruffling or ruche about the neck, opposite page 502, with edging very similar to that opposite page 10; more simple ruffle about the neck, opposite page 518; also a ruffle about the wrist, of simple character, opposite page 10, of defendants' Exhibit E.

I will state that some of these ruffles seem to be of compound character, that is to say, one ruffle above the other, or of varied fold; some with a plain edge, and some of them with ornamented edging, and might be called a ruche or ruffle; some fluted, and some only simply gathered.

X. 126. Look at Exhibit G, Gallery of Arts, vol. 1, pages 84 and 85, at figures 367, 380, and 381, and say whether puffings and rufflings are not there represented?

(Same objection as to question 122 and 124.)

A. They are. I have looked at such pages and figures. I find puffings and rufflings in all the figures.

X. 127. In Exhibit F, vol. 3, Knight's History of England, page 177, do you find in the wood-cut on such page any illustration of puffing?

(Same objection as to last question continued.)

A. I have looked at the cut on page 177 of Exhibit G, and find puffing at the shoulder, and something like puffing or bagging at the lower part of the breeches, or about the thighs.

X. 128. Look at the several specimens of puffing marked A, B, and C, in defendants' Exhibit H, and state whether said several specimens of puffing, marked A, B, and C, are characterized by two flattened

105 borders or plain bands, with two rows of fluting running along on the inside of them, and having a zone of gathered, crinkled, or irregularly-waved surface, made simultaneously, and without resort to laundering, by some mechanical device for that purpose?

(Complainant's counsel wishes the examiner to note that they are attached to the said paper, defendants' Exhibit H, two pieces of trimming, which are marked "C," and which seem to be somewhat different from each other. Complainant's counsel further objects to the question, for the same reason that the Exhibits A and C (attached to such paper Exhibit H) are represented from such paper, which is an affidavit made by one Caroline Weitling, in this cause, to have been made by her previous to the date of the complainant's patents; that the only proper evidence of any such manufacture is the testimony of said Weitling taken in these causes by the examination and cross-examination of said Weit-

ling; and that no inquiry of any alleged manufacture of hers is pertinent in these cases until such witness has been herself called as a witness, and has proved or testified as to such manufacture.)

A. Exhibit A, I think, was not made simultaneously, without resort to laundering, as it is made in two pieces, and stitched on to a plain band or centre surface connecting the two rows of puffed fluting, each of which, I think, was probably made by a mechanical device simultaneously, or if it was not so made, it has all the appearance of having been so made.

B is like A, with the exception that the two pieces seem to have been made at one operation, and the centre band stitched on the outer flattened border, lying between the rows of fluting, on the edge of each line of trimming, and the outer flattened borders are perfect. C
106 is like B, and the other C, which is a smaller piece, is like A; this piece, and the piece A, seem to have been made in single rows, and stitched together on a band between the flutings, and it is difficult to say that even one row of either C or A, last above referred to, was made and completed complete, without resort to laundering, by a mechanical device for that purpose.

There are in all the exhibits flattened borders, or what will answer to flattened borders, inside of which are rows of fluting, or what will answer to rows of fluting, separated by irregular wavy or crinkled surface, but in last C and A the flattened borders, or what lies in the place of the flattened borders, in the other exhibits can hardly be said to be flattened borders, when considered in the light of the description of a flattened border given by me. And the fluting in the last-named C is quite imperfect.

X. 129. What do you say is the flattened borders for? Are they to receive stitching, and on which, or by which, to attach the puffing to an article of dress?

A. They are a part of the finished puffing, flattened, for the purpose of giving a finish to the same, and an uniformity of gather or plait, corresponding to the uniformity of the gather in the fluting to receive a tape, or the material to which it is to be stitched, or of affording a smooth surface, capable of running through a proper feed in a sewing-machine, in such a manner, and to such a degree of finish, as that it would not be roughened or displaced in its relative folds in being sewed by hand or by machinery. That is to say, were it not uniformly flattened and pressed into smooth bands or borders along, by, or between the rows of fluting, it could not be passed through the ordinary feeding mechanism of a sewing-machine without displacing and destroying the regularity and beauty of the fluting in stitching the same, and these bands are flattened for the purpose of securing these results.

X. 130. When the patented puffing No. 3001 is made in single rows, are or are not the flattened borders intended to receive the stitching mentioned, and by which to attach a puffing as trimming to an article of dress?

107 A. Yes.

X. 131. Are they intended for any other purpose?

A. I should think they might be used with a simple band, if the taste required it, without being attached to a dress or an article of clothing; for instance, for a neck ornament or in other places where ribbon might be used; but the general use is, of course, as an article of trimming; and doubtless that it what it is mainly used for.

X. 132. When they are used with a simple band, are not the flattened borders to receive the band?

A. On one side.

X. 133. Is not the band intended to cover the flattened borders?

A. Where band is used, on one side at least.

X. 134. Look at these specimens of puffings, marked A, B, and C, on Exhibit H, and state whether or not they cannot all be stretched laterally?

A. All except one portion of small C, or last C, the centre portion of which seems to have been stretched as much as it can be; still all of them may be said to be capable of being stretched in their centre portion slightly.

X. 135. Look at those several specimens again, and state whether it is your opinion that any one of them had been laundered at any time.

A. I think not.

X. 136. Cross-question 38 repeated, as not being answered.

(Objected to by complainant's counsel, as it should have been repeated immediately after the answer originally given.)

A. If you mean to inquire in regard to the definite article of manufacture of fluted puffing described in the re-issue 3001, then I answer, it is material; if not, then I would state that there are many articles of new manufacture, I presume, that could not be laundered at all, and which are not and could not be made simultaneously complete.

108 X. 137. Are you speaking of new articles of manufacture of puffing in your last answer?

A. In the first part of my answer I refer to that; I am trying to answer your question in its breadth. I quote your questions, "Do you mean to be understood that it is at all material to the existence of any new manufacture that it is all made simultaneously or complete without resort to laundering." That my understanding of the question may be distinctly given, I request the examiner to emphasize the words, "existence of any new manufacture."

Adjourned to October 1st, at 11 a. m.

TUESDAY, *October 1st*, 1872.

Present, counsel as before.

Adjourned to 2nd inst., at 11 a. m.

WEDNESDAY, *October 2nd*, 1872.

Present, counsel as before.

Continuation of the testimony of Samuel P. Kittle.

X. 138. I am inquiring of any or all so-called new articles of manufacture of puffing. Please answer this question.

A. I don't think that I can be supposed with certainty to know about all new articles of manufacture in puffing. Before attempting to answer, I would be pleased to have them laid before me. I do not now remember of any fluted puffing of the character described in question 38, but that it is essential to its existence, as there stated and referred to.

109 (Defendants' counsel puts in evidence a piece of trimming, which is marked "Defendants' Exhibit I, October 2d, 1872, R. E. S., Ex'r." It is admitted by complainant's counsel that the said Exhibit I was, in its original state as it came from the machine, a piece of fluted puffing, such as is described in the "Exhibit, Re-issue 3001," which exhibit has been thoroughly wet and soaked, and stretched by defendants' counsel, and subsequently dried, but not laundered, leaving it in the condition it now is.)

X. 139. Please look at defendants' Exhibits B and I, and state what

difference, if any, there is between these two articles, as articles of puffing?

A. Waiving the dirty state in which I find B, the chief difference seems to be in the double breadth of I, and the duplication of the gathered rows.

X. 140. Do you observe any other difference?

A. I think that is about the difference, unless I speak of the two bands additional in Exhibit I, which are stitched to the gathers or flattened borders, that is to say, were there two rows of gathered parts in I, as there are in B, and a band or tape stitched on at the centre gathering, I think they would be substantially alike.

X. 141. Look at said Exhibits B and I, and say whether you see in them rows of fluting running along on the inside of two flattened borders or plain bands, and a zone of gathered, crinkled, or irregularly-waved surface, on both or either of them?

A. I do not.

X. 142. You say, in your answer to question 4, "that the invention specified in re-issue 3001 consists in a new article of trimming;" do you not say this only because you never saw any trimming of that configuration or shape before; and if you had seen any trimming like that in shape or configuration, before the invention spoken of, or if you had been informed by persons in whose judgment and veracity you
110 had confidence that trimming of this shape had been made before said alleged invention, then you would not have said that this invention consists in the production of a new article of trimming, would you?

(Objected to by complainant's counsel, because the question 4, in answer to which the witness stated "that the invention specified consists in the production of a new article of manufacture," was what the witness regarded the invention described and claimed in the re-issue 3001 to be, and not whether, as a matter of fact, that invention was new or not.)

A. I said in answer to that question that the invention described in 3001 consisted in a new article of trimming, "a wavy, puffed, crinkled, or gathered centre, of irregular form, bounded by regular rows of fluting, having flattened borders or plain bands on their exterior, completed singly or in duplication, in a piece, without resort to laundering, and capable of being stitched in the flattened borders."

That I should have said in answer to the question, without regard to previous knowledge or hearsay.

X. 143. Would you have said that if you had known the puffing described in said answer to have existed years before complainant's invention?

A. Certainly; for I am asked what I regard to be the invention described and claimed.

(Defendants' counsel offers in evidence several specimens of puffing, which are marked "Defendants' Exhibits J, K, L, M, N, and O, October 2d, 1872, R. E. S., Ex'r," and also a pencil-drawing on paper, which is marked "Defendants' Exhibit P, October 2d, 1872, R. E. S., Ex'r.)

X. 144. Look at the above exhibits, J to O, inclusive, and state
111 whether there is, in your judgment, any difference in any one or more of said articles of puffing, one with the other; and whether any and all of them are like the drawing marked "P;" and if not, in what respect do they differ?

(Same objection as to cross-question 122.)

A. There are none of them like the pencilled sketch, marked "Ex-

hibit P;" the sketch is a very rough affair, and cannot be said to represent any of them. I am sure no one would be helped to make a puffing, or dress-trimming, by such a sketch as that alone.

As regards the differences among the exhibits, J to O; J and K are very rough specimens of puffed fluting, and seem to have been made by some device that did not control or afford regularity of breadth of material between the rows of fluting, neither are the flattened borders made with uniformity or regularity; indeed, the fluting seems to be disarranged and drawn out to a considerable extent. L and N are much more perfect, and seem to me to have been made by an organized machine or device for that purpose.

M and O are better specimens than J and K, but not as good as L and N; however, the fluting and flattened borders seem to be regular, and the wavy centre quite uniform in breadth, and I should think were made by or in an organized machine or mechanism for that purpose.

I will state, however, there seems to have been some irregularity in the breadth of the puffed or crinkled center in L; the same is true in regard to N.

X. 145. Will you state whether or not all those exhibits last mentioned are distinguished by two plain bands or flattened borders, two rows of fluting within said bands or borders, and lying along by the side of them, and which rows of fluting are separated by a zone or space of gathered, crinkled, puffed, or irregularly-waved surface, which is made simultaneously with the other parts, and completed without resort to laundering?

(Same objection continued.)

112 A. L, M, N, and O have the irregularly-waved centres between the regular rows of fluting, and outside and along by the fluting are flattened borders.

K has the irregular waved centre between the regular rows of fluting, but the flattened borders on one side do not break the rows of fluting directly; but there is a portion of the material thrown up, and the flattening of the flutes is very imperfectly accomplished.

The same imperfection appears at one end of J, and the fluting is drawn out considerably on one side, and both J and K, are curved, and appear not to have been properly controlled by guide.

As to the parts above described having been made simultaneously and complete without laundering, I will not state positively, but think quite possibly they may have been, if mechanism adapted to that purpose was used.

X. 146. You think that the sketch Exhibit P does not in any respect resemble the puffings, Exhibits J to O, do you?

(Same objection.)

A. I could not say that: in connection with an explanation of Exhibits J to O, with proper language of description, this might be said to represent the fluting marks, and shade of the waved centre, and the position of flattened borders. I say this alone would not aid in making such trimming.

X. 147. Referring to your answer to cross-question 26, in which you state that "there is in this article a centre line, as I have before described, which breaks an angle and gives a general direction to much of the irregular wavy centre or zone;" state whether the waves in that exhibit do not all run in the same direction. Look at the "Exhibit Herrmann and Lautenbach" before you answer this question.

A. No.

X. 148. Do they not all run into the angle in the same way?

113 A. They do not all run into the angle.

X. 149. Are they not all broken by the angle?

A. I can hardly say that; most of them that cross the centre line are.

X. 150. Do you notice that any of the irregular wavy surface in puffing patented No. 3001, is broken by an angle in the centre of the puffing?

A. No; I don't; it is curved and crinkled in many directions.

X. 151. Suppose the material used for the puffing was some other article instead of muslin, say, for instance, fine morocco, to make the configuration or shape described in the patent 3001, would that make any difference in the appearance or shape of the puffing?

A. I think it would.

X. 152. If woolen cloth were used, would that make any difference in the shape of the puffing, referring to my question 151?

A. I think it would; I mean by that, the thickness of the material would have something to do, in my opinion, with regard to the direction and number of the waved or irregular lines.

X. 153. Would the difference be so great as to make the shape or configuration different from an article of muslin used in the same way?

A. Not substantially different, but it might be said to be different, if the device for making it was adapted to the kind of material or proportioned thereto, and were the other conditions in the material the same as in the muslin, I think the result would be nearly identical.

X. 154. Is that answer applicable to question 151?

A. Yes, if you could put the morocco in the same condition. I don't see how that could be done.

X. 155. Suppose the article used, instead of being cloth or morocco, was sheep-skin, referring to my question 151, would that make any difference in the shape or configuration of the puffing?

A. Of course, the nearer you approximate a fabric intended to be worked in a given machine, or by a given device, the conditions
114 being the same, the nearer the result would approximate the result on the given material, with the given machine or mechanism; and the further deviation in the material or in the conditions, or in the machine, the less the similarity of the result would be likely to be.

X. 156. Can you not answer my last question, 155, categorically, yes or no?

A. No; I understand you to be inquiring about the direction of the waves or crinkles in the puffed centre, in all of the above questions. If you mean to include the rows of fluting by the side of the puffed centre, and the flattened borders outside of the fluting, then I will state, that I believe it would be difficult to produce from morocco or sheep-skin in its ordinary state, as used in manufacturing, such a puffing; and that I might be better prepared to answer intelligibly, I request specimens of which your are inquiring. In my answer to cross 155, I tried to give you what in my judgment was a fair answer, covering the subject particularly under inquiry.

X. 157. I now ask you whether if morocco or sheep-skin was used instead of muslin or cloth, on the machine patented 3000, and made pliant by a suitable process for passing over the arched guide, and to receive the impression of the fluting-rollers as mentioned in the patent 3000, would the shape or configuration as puffing produced by said machine be the same as if muslin or cloth was used, and if not the same, please state in what essentials the difference would be.

A. I think you have not taken into view the fact that the material

would require to be starched in order to take the configuration and retain it; and therefore it would be different; that I may be understood fully, if it is desired by the counsel to understand me fully, I will state, that the inventor has produced a machine for the purpose of operating ordinarily on a material that is capable of being laundered, and that is ordinarily laundered; and in the hypothetical cases given above, you have assumed a production of a result on materials which to me does not appear was contemplated by the inventor; and yet, were ar-
115 ticles of trimming for dress or shirt-bosoms to be required from leather or from woolen cloth, I can conceive how they might be prepared, so that with a machine increased in size to correspond to the increased thickness of the material, the identical result might be attained.

X. 158. Then, I understand you to answer the above question in the affirmative?

A. No; I do not mean to be understood that way.

X. 159. Then you answer it in the negative, do you?

A. Yes, in view of my explanation above.

Adjourned to 3d inst., at 11 a. m.

THURSDAY, *October 3d*, 1872.

Present, counsel as before.

Continuation of the testimony of Samuel P. Kittle.

X. 160. Then I understand you to say that the machine spoken of would produce the configuration and shape spoken of in my question No. 159, on the article mentioned in that question?

A. Having the conditions before referred to by me, it would produce a configuration of puffed centre between regular rows of fluting, the centre being of a wavy or irregular form.

X. 161. In the beginning of your cross-examination you stated that you were engaged for a short time as a solicitor of patents. Had you any experience at that time in what would be called "design-patents?"

A. I don't remember any special case which I drew the specifications for. I remember having some consultation in regard to designs for stove-fronts, but no special experience.

X. 162. What year was that, about?

A. Years 1853, '54, and '55, if I remember correctly. I can't tell which year I had occasion to examine designs of stove-fronts.

116 X. 163. Do you consider yourself an expert in what might be called "design-patents?"

(Same objection by complainant's counsel as before taken in respect to new matter.)

A. Yes.

X. 164. Suppose complainant's invention had been secured by a design-patent, what would have been the difference between such a patent and "Exhibit, Re-issue 3001," so far as securing the shape and configuration mentioned therein?

(Same objection by complainant's counsel continued, and further, because the question inquires as to suppositious patent, the allowance of which in any shape was under the discretion of the Commissioner of Patents, and it is impossible, therefore, to know what such a patent would be or would not be, and it is therefore impossible for any witness to answer properly such a question.)

A. I think design-patents are granted only for things of taste, beauty, or ornament, and does not hold the mode in which the article is produced.

Utility is not considered as a requisite to a design-patent, if I remember.

I think a design-patent is simply for decoration or beauty of ornament without regard to manner of production or the utility of the design.

And I think a design is secured by patent, if I remember correctly, for seven years only, but may be extended.

The article patented by "Exhibit, Re-issue 3001" is for something more than for configuration or beauty of design; it is for a new article of manufacture, or a new and improved puffing, and consists in the production of a puffing applicable to shirt-bosoms, trimming, or other articles of
117 dress; and is not confined as a design would be by patent to a specific configuration, but is a configuration which is multiform and has reference to a specific mode of production, and of necessity has great utility as well as beauty and ornament.

X. 165. Will you reconsider your last answer and state if you wish to alter it in any respect?

(Same objection continued, with the further objection that the question whether a patent for this article should be such as it is, or a design-patent, so called, is entirely a matter of law for the court, and irrespective of the fact whether a design-patent would or would not cover the same conformation of article described in re-issue 3001.)

A. I think the inventor would be obliged to confine himself to a specific configuration solely, without regard to any other consideration: and I have the impression, I will not be certain, he would have to confine himself to a specific application; whereas in the new article of manufacture patented in "Exhibit, Re-issue 3001" I do not think he has confined himself by the specification, illustration, and claim to a specific configuration or design, or was required to; but, as I have repeatedly stated before during this examination, all the different parts or members of the trimming, (fluted puffing,) patented in the "Exhibit, Re-issue 3001," may be changed, varied, and modified, to wit: the central zone is specified, illustrated, and claimed as of irregular, crinkled, gathered, or wavy form; its breadth is not stated, nor proportioned by any special rule given to the breadth of the other members or parts; and it may be fulled or only slightly fulled; the only bound given to its fullness being that there shall be greater breadth and fullness of material in a given breadth of the puffed and finished zone, so that it may be drawn out or extended after being finished.

The breadth of the regular rows of fluting is not fixed, as a part of a design would be required to be fixed, with regard to their relative
118 breadth, nor are they in regard to their number or size or depth of flutes, only that they shall be regular rows; neither is the breadth of the flattened borders fixed relatively with regard to the other parts or members, as they would have to be if the invention was patentable as a specific design.

X. 166. Will you reconsider your last two answers and state whether you wish to add anything more?

(Objected to by complainant's counsel as before, and for the further reason that the witness has already answered the question sufficiently full to satisfy himself, and has completed his answers thereto, and if the defendants' counsel desires any further answers with reference to his supposed patent, he should put specific questions; and that the manner of examining the witness as adopted by defendants' counsel is improper in form; certainly improper in continued repetition.)

A. No: I don't know as there is anything further necessary to be

added. I might say, however, that the "Exhibit, re-issue 3001," requires certain things to be done by some device adapted to the performance of those things, and to be done simultaneously, which I don't at this minute conceive how a patent simply for a design would require.

X. 167. I do not think you have answered my question. I asked you, "Suppose complainant's invention had been secured by a design-patent, what would have been the difference between such a patent and re-issue 3001, so far as securing the shape or configuration mentioned therein?" I will now vary the question by asking you if a shape or configuration of an article of puffing, new in its design, and possessing the other requisites for a design-patent, could not be secured for a patent for a design?

(Same objection as to cross-question 164.)

A. I think so.

119 X. 168. I will now ask you whether, assuming for the purpose of this question that the invention of the complainant was of an article or configuration of puffing, formed by crinkling, gathering, or irregularly waving one portion of a strip of muslin, or other material, with fluting it along the edges of such portion, and forming flattened borders, or portions outside of the flutes, or between two next adjacent rows to them, to receive stitching, and that the above-described design or description of puffing was new, and originated with the complainant; and there having been other descriptions of puffing, as to shape and configuration already in existence, would it not be a proper invention for a design-patent, or would not a design-patent hold such a design or configuration? Answer this if you can, yes or no.

(Same objection by complainant's counsel as before taken in respect to new matter, and that the question has reference to matters of law, which are for the court to determine.)

A. Yes; waiving all variations of relative relations of parts, as to the increase or variation of them with reference to other parts, and the mode of producing, I think it would; that is to say, if the design was a fixed and described design that was not to be changed in the proportionate size or number relatively of the various parts, only so far as regards the uniform variation of each part or member or figure composing the whole in the same relative degree.

X. 169. Can't you answer the above question, yes or no?

A. I cannot, and have my answer as intelligible as I would like to have it. The question inquires for something different from what I have seen, and it appears to me, if answered categorically, would leave me in a doubtful postion in regard to my understanding of the thing inquired about.

120 (Defendants' counsel offers in evidence a design-patent, and the drawing and the specification thereto annexed, No. 4500, granted to Robert Werner, bearing date November 29th, 1870, "for a design for dress-trimmings," and the same is marked "Defendants' Exhibit, Werner patent 4500, October 3d, 1872. R. E. S., Ex'r."

The reception of the said exhibit is objected to by complainants' counsel on the ground that it is new matter, in no manner referred or alluded to in the direct testimony of the witness, and is not therefore admissable in the cross-examination of the witness; and all examination of the witness by defendants' counsul in respect to this patent is put in under protest of the complainant's counsel, and under notice that the witness is made defendants' witness.

Defendants' counsel says that the complainant has put in evidence "Exhibit, Hermann and Lautenbach," which consists of an article of

trimming, sometimes called puffing, and which was made under this patent, and in conformity therewith.

The witness was examined in chief in reference thereto, and the object of introducing this exhibit at this time is for the purpose of cross-examining the witness more intelligently in reference thereto; and that upon other grounds well known and recognized under the rules of evidence.

Complainant's counsel states that the statement now made by defendants' counsel that the "Exhibit, Hermann and Lautenbach" was made under this Werner patent was the first intimation that has been had in the examination of the witness in these suits as to any such fact, and that whether the trimming in such "Exhibit, Hermann and Lauten-
121 bach" is made in accordance with such "Exhibit, Werner patent" or not must, of course, be matter of truth; but the objection heretofore taken to the "Exhibit, Werner patent" is insisted upon for the reason given.)

X. 170. Look at "Exhibit, Werner patent 4500," and state whether the V-shaped folds in the middle row of the drawing attached to said exhibit are or are not regular in their shape, and do not all run in the same direction.

(Same objection by complainant's counsel to the question as referring to new matter, and same notice as heretofore given, more particularly to cross-question 122.)

A. The middle folds *a* are V-shape, and of uniform length and breadth, as illustrated in the drawing, and they run to a centre line in the same direction from both sides, forming a V-shape.

X. 171. Look at "Exhibit, Hermann and Lautenbach," and state whether in your opinion that exhibit was made under and in conformity with "Exhibit, Werner patent 4500," so far as the V is concerned.

(Same objection continued.)

A. It was not.

X. 172. What is the difference?

A. The specification in the "Exhibit, Werner patent No. 4500" requires, I quote: "I make the middle row *a* of ruffles or folds V-shaped, with greater or less regularity, as indicated in figure 1." Then I refer again to the description of the figures, I quote: "Figure 1 represents a face view of my design. Fig. 2 is a longitudinal section of the same, taken on plane of a line XX, figure 1." Now by actual measure of fig. 2, I find the folds are uniform in the drawing, both in breadth and length as well as direction, and refer you to the drawing in the patent, figure 1, for their length and direction, and figure 2 for their breadth.

122 In the "Exhibit, Hermann and Lautenbach" there is no regularity either in breadth or length of the folds or puffing, and it doesn't appear at all like the drawing in the patent "Exhibit, Werner patent No. 4500." However, there is a centre line giving a general crooked direction to the puffing.

Adjourned to 4th inst., at 10.30 a. m.

FRIDAY, *October 4th*, 1872.

Present, counsel as before.

Continuation of the testimony of Samuel P. Kittle.

X. 172. Look at the specification attached to "Exhibit, Werner patent 4500," and you will find the language, "I make the middle row of ruffles or folds V-shaped, with greater or lesser regularity, as indicated in figure 1;" and also look at the exhibit marked "Hermann and Lautenbach," and state whether or not the exhibit, so far as referred to in that

quotation, appears to have been made under or in conformity with said patent.

(Same objection continued.)

A. I think it is not, for the reasons before given, and because it is not as indicated in figure 1; and for the additional reason that very few, if any, of the central puffs in "Exhibit, Hermann and Lautenbach" are V-shaped at all, if figure 1, before referred to, is a correct indication of V-shape. As regards the quotation given by you in your last question, and by me in my last previous answer, (I refer to the words "greater or lesser regularity,") I do not consider that such words, in view of the illustration in the drawing, and other parts of the language of the
123 specification, can be regarded as giving so great a latitude to the character of the design as manifestly appears in the "Exhibit, Hermann and Lautenbach," in regard to the central puffed portion of that exhibit; this is especially true, it seems to me, when figure 1 is understood as illustrated and explained by the inventor in figure 2; and furthermore, I find these words in the claim, "the central ruffle V;" now I cannot understand for what purpose the V is put in the claim, unless it has especial reference to the shape of the central portion inquired about, which shape does not exist in the "Exhibit, Hermann and Lautenbach," (inquired about,) with anything like what might be regarded as regularity, if at all.

(Defendants' counsel says that as complainant's counsel objected to questions 170, 171, and 172, as referring to new matter, and as objectionable on that ground, defendants' counsel withdraws the questions, and asks that the questions and the answers might be stricken out. Complainant's counsel denies the right of the defendants' counsel to withdraw said questions and answers without the consent of the complainant's counsel.)

X. 174. Did you not state to the complainant's counsel before he made the last objection, that "that could not be done," referring to the statement of defendants' counsel above written?

(Objected to by complainant's counsel as irrelevant and impertinent.)

A. When I heard the defendants' counsel dictating a statement to the examiner, at that point where he says I withdraw, or withdraws the questions and answers, I remarked to the complainant's counsel, "He can't do that;" that's all.

(Defendants' counsel puts in evidence a drawing, which is marked "Defendants' Exhibit Q, October 4th, 1872. R. E. S., Ex'r.")

124 X. 175. Please look at Defendants' Exhibit Q, and state whether or not that is a representation or drawing of fluted puffing.

(Same objection as to question 122.)

A. Taken alone I don't think it would guide one in the production of fluted puffing. It can hardly be said, alone considered, to be a drawing of fluted puffing.

(Defendants' counsel offers in evidence a drawing, which is marked "Defendants' Exhibit R, October 4th, 1872. R. E. S., Ex'r.")

X. 176. Please look at Defendants' Exhibit R, and state whether that is a representation of fluted puffing.

(Same objection as to cross-question 122.)

A. A very poor one, if it is. I don't think it can be said to be a representation at all; it certainly would not of itself be a guide to the production of fluted puffing.

X. 177. Look at Defendants' Exhibit Q, and state whether it bears any resemblance to the drawing, figure 1, of fluted puffing, annexed to "Exhibit, re-issue 3001."

(Same objection as to question 122.)

A. It bears a slight resemblance to figure 1, or it more particularly bears a resemblance to a portion of figure 1, found on one side, right or left, of said figure, where there is a puffed centre, flattened bands, and an indication of stitching. I don't mean to be understood to say, however, that a like configuration is found in any part of figure 1 of the "Exhibit, re-issue 3001" to that of Defendants' Exhibit Q, as a whole; still there is a resemblance in the centre and sides and stitching of "Q" to the centre and sides and stitching of one of the three rows of figure 1.

125 X 178. Then state what you mean by slight resemblance to a portion of figure 1, found on one side, right or left, of said figure, where there is a puffed centre, flattened bands, and an indication of stitching.

(Same objection continued.)

A. I quote the last part of my previous answer, commencing at "Still there is a resemblance," and mean that there is a resemblance in those parts and their relation; they resemble each in position; there is a resemblance in mark, line, and illustration, when taken together.

I do not mean to be understood that one is a copy of the other, or would impress one looking on them as a guide in the production of the same article in all its details.

X 179. In the mark, line, and illustration, do you mean the line running up and down the sides of the two drawings?

(Same objection continued.)

I refer you to the part of my previous answer quoted in my last answer. I do not think I can use language to explain my meaning more clearly.

X 180. Question repeated.

(Same objection continued, and question also objected to on the ground that the witness has fully answered the question now repeated.)

A. I meant the marks of the stitches, or flutes, the lines indicating the flattened borders, and the illustration as a whole, referring you again to my last answer.

X 181. When you used the words, "and the illustration as a whole," do you mean that there is a resemblance as a whole between defendants' Exhibit Q and the drawing annexed to "Exhibit Re-issue 3001?"

(Same objection continued.)

126 A. No; I mean the resemblance lies in Exhibit Q, and one of the rows of the drawing, figure 1, as I have stated several times before.

X 182. Will you mark in red ink one of these rows in a way to designate it?

(Objected to on the same ground as question 122.)

A. I have done so, marking the row on the lower left-hand corner of figure 1 "October 4th, 1872, S. P. K."

X 183. Is the resemblance you mention, in your opinion, a strong resemblance?

(Same objection continued.)

A. No.

X 184. Please look at defendants' Exhibit R, and state whether there is any resemblance between that exhibit and the drawing attached to "Exhibit Re-issue 3001."

(Same objection continued.)

A. Yes; there is just about as much resemblance between them as between Exhibit Q and figure 1 in "Exhibit Re-issue 3001."

X 185. Have you examined carefully the "Exhibit Re-issue 3001."

A. Yes.

X 186. State whether defendants' Exhibits Q and R are such puffings as can be made with the machine in "Exhibit Re-issue 3000," as patented therein.

(Same objection to question 122 continued. Objected to also on the ground that the question assumes that defendants' Exhibits Q and R are puffings, while there is no evidence that they are puffings in this case.)

127 A. They are very poor representations or illustrations of the puffing that machine would produce.

X 187. But you mean to say they are representations of the puffing that machine produces?

(Same objection as to question 122.)

A. I mean to say, what I have said repeatedly before of the drawings or illustrations introduced, that they are very imperfect representations of anything I know anything about in the way of fluted puffing, and yet they come under a class of sketches which cannot be said to be entirely destitute of resemblance, or not an outline of some of the characteristics of the thing intended to be represented; and as sketches of the character above cited they are representations of a fluted puffing that might be produced by the machine described in "Exhibit Re issue 3000," but not a drawing or illustration that would accurately guide one in the production of a fluted puffing such as described in re-issue 3001.

X 188. Are you well versed in what are known as or called fluting-rollers?

A. I think I am.

X 189. When they are prepared for use in making fluting, are they or not usually mounted on a frame one above the other?

A. They are usually mounted on a frame one above the other.

X 190. Do those frames usually bear a resemblance to each other?

(Same objection as to question 122.)

A. I cannot say that they do; some fluting-rollers project beyond or outside of the frame on which they are mounted, and in some they are mounted in a frame and rest at both ends in the bearings which are in the frame; with that distinction, there is a resemblance.

X 191. About how long have you known fluting-rollers, such as you have described?

128 A. About five or six years—it may be longer. I can't definitely state the time.

X 192 You cannot state any time longer than that in your answer above?

A. I can't positively, though I have known of fluting devices much longer.

X 193. In your direct examination you speak of a guide; what is a guide, and what is it used for?

(Objected to by complainant's counsel on the ground that the word "guide" is used indefinitely in the question, without reference to the machines in controversy.)

A. A thing or person to give direction.

X 194. What is a guide for, when used in connection with fluting-rollers?

(Same objection as to question 122.)

A. To direct some thing.

X 195. Is that all?

(Same objection.)

A. Yes.

X 196. What is the office of the guide when used as a part of the machine patented in re-issue 3000?

(Objected to by complainant's counsel, as the question does not state what kind of a guide the inquiry is made about.)

A. The guide E therein described gives direction to the line of advance, and direction to the amount of material to be supplied in the puffed centre of the finished trimming, or direction and control to the supply of breadth of material between the regular rows of flutes.

X 197. Is that all the guide is for as a part of said machine?

129 A. It is for the purpose of directing and controlling the amount of material supplied between the rows of fluting, or into and between the two plain zones of the fluting-rollers, mainly, if not wholly. Though there is a collateral office which it performs, of giving general direction to the strip of muslin or material to be formed and manufactured into a fluted puffing. I think that is all. It might be stated, however, this guide has the capacity, as described, of performing that office, so that there may be different degrees of fullness, or different amounts of breadth afforded by its adjustment for that purpose, in the material directed or supplied between the fluting-rollers. And it specifies giving an arched direction or form to the parts supplying or directing the material to the plain zone or zones of a roller or a pair of fluting-rollers.

X 198. Have you now stated all that the guide is intended to do, or can do, in connection with the other parts of the machine, to produce the puffing described in "Exhibit, Re-issue 3001?"

A. I think so.

X 199. Is the guide mentioned any part of the fluting-rollers mentioned in said re-issue patent 3001, or is it a separate instrument?

A. A separate instrument or device.

X 200. Is the guide essential, or is it necessary, to produce the article of puffing patented in 3001?

(Same objection as to question 122.)

A. No, not necessary, unless the machine referred to were used in its production.

X 201. Do you mean to say that the machine referred to as patented in re-issue 3000 would produce the article patented, 3001, without the arched guide being used as a part of said machine?

(Same objection continued.)

A. No; you must have the guide, or an equivalent, or some other mechanism.

130 X 202. I now ask you whether or not an article of puffing, consisting of either a single row or two or more parallel rows, each consisting of flattened borders, with flutes running along their inner edges, and a puffed or gathered or a crinkled surface or surfaces between the flutes, can be made on the machine patented, 3000, without the use of the arched guide on or as a part of said machine?

(Same objection by complainant's counsel, and the further objection on the ground that the re-issued patent 3000 is on the guide in combination with the fluting-rollers, not on the fluting-rollers alone.)

A. I think not, practically; there might be a short piece of fluted puffing produced by the simple fluting-rollers or machine as supposed, by directing the material in, and by one's fingers, with great care, but practically, the fluting described in "Exhibit, Re-issue 3001;" could not be produced by the suppositious machine, with no guide.

X 203. When you use the term "a short piece," what do you wish to be understood as constituting a short piece; one inch, one yard, two yards, a dozen yards, or fifty yards?

(Same objection as to question 122.)

A. A piece but a few yards long. As I understand, these machines are operated on a long strip of material, and the strips are turned out in ten or twenty yard pieces or longer; and I mean to say that I think it would be impracticable, in fluting-rollers having the plain bands, annular rows of fluting-meshes, central annular zones in duplication, like and as they are used in the production of fluted puffing, for a person, without the employment of some analogous means to the guide E in "Exhibit, Re-issue 3000" to produce successfully and practically the fluted puffing described in "Exhibit, Re-issue 3001."

131 I would not say, however, that a person with great care and skill might not produce between the fluting-rollers (without such guide) a single row or strip of fluted puffing, bearing a close resemblance to the puffing described in "Exhibit, Re-issue 3001" of the length of a few inches, possibly a few feet or yards; but I do distinctly state that it is my opinion that it would be impracticable to produce the fluted puffing in the manner and as required in the market to the extent of a practical result and manufacture, without the employment of some analogous device in connection with an organized machine for that purpose, substantially like the "Exhibit, Re-issue 3000," without inventing.

(Defendants' counsel objects to that part of the answer commencing after the word "long," near the beginning of the answer, down to the figures "3001," also that part of the answer commencing at the words "but I do distinctly state," &c., down to the close of the answer, on the ground, first, that it is not responsive to the question; and secondly, on the ground that it evades the question, and introduces matter unnecessary and foreign to the subject.)

X 204. Cannot such an article of puffing as is mentioned in question 202 be made on a machine patented 3000, without the use of the arched guide, or any instrument that may be said to be an equivalent to an arched guide, being used in connection with the fluting-rollers used in said machine? I mean an article of puffing of either a single row or of two parallel rows, the said two rows presenting the appearance of flattened borders, with flutes running along their inner edges, and a puffed or gathered or crinkled surface between the flutes.

(Same objection as to questions 122 and 202.)

A. I can't tell what can be done by some ingenious inventor in

132 the way of a production of a device that is not analogous to the guide E in the machine referred to.

X 205. Cannot you answer the above question yes or no?

(Same objection as to question 122.)

A. No.

X 206. Is the reason why you cannot answer the question yes or no because you think it doubtful whether such puffing could be made by the use of the fluting-rollers above-mentioned without an arched guide or its equivalent?

(Objection continued.)

A. No.

X 207. Please state what is the reason why you cannot answer the question yes or no.

(Objection continued.)

A. Because I cannot state what may be done.

X 208. I ask you now again whether such a puffing cannot be made with

the fluting-rollers used by the complainant under his patent 3000, without the arched guide being used in connection therewith, so as to present the same characteristics of flattened borders with rows of flutes, and a crinkled, gathered, and puffed center to said puffing?

(Objection continued.)

A. If you mean in a machine organized as described in "Exhibit, Re-issue 3000," and in the employment of one's hands, then I refer you to my answer to question 202 for my present answer; but if you mean with the employment of other and different mechanical device from the guide E, described in "Exhibit, Re-issue 000," then I refer you to my answer to the 204th question.

133 X 209. I mean to ask you, as I had supposed I had asked you in the several last questions, substantially this: Place the machine "Exhibit, Re-issue 3000" before you, and detach from that machine the arched guide; will not the machine in its then condition make an article of puffing, the material to be puffed having the usual conditions in every other respect of either a single row or of two parallel rows of flattened borders, with flutes running along their inner edges, and a puffed or gathered or crinkled surface between the flutes?

(Same objection as to question 122, and on the ground that the question has been repeatedly asked and answered.)

A. I do not think the machine organized and located as stated in the question would practically produce the result inquired for. That I may be understood, I will state I understand you now to ask me whether or not a machine organized in all respects like in the one in Exhibit re-issue 3000, and the fabric and material in all respects prepared as is usual in the preparation of material to be manufactured into fluted puffing by that machine, and all the conditions of the material and the machine being the same as is customary in the operation of the machine and the production of the fluted puffing, patented in "Exhibit Re-issue 3001," with this exception, that the guide E shall be removed, and no mechanical device employed in its stead, then would such rollers, being revolved and acting upon such material, produce the new article of manufacture in "Exhibit, Re-issue 3001?" If I am correct, my answer is no, not successfully or practically.

Adjourned to October 5th inst., at 10.30 a. m.

134 SATURDAY, *October 5th*, 1872.

Present, counsel as before.

Continuation of the testimony of Samuel P. Kittle.

X 210. In your last answer you close with the language, "No, not successfully or practically." Can't you make the answer more definite and particular? For instance, can't you state whether yes or no absolutely? Can't you state to what extent and in what particulars the machine above constituted and used would make the puffing inquired about? Would the puffing not have flattened borders and rows of flutes inside of the flattened borders; and would it not have a space or zone between the flutes, and would not the same be gathered, more or less, and the space constituting what you call the zone, crinkled or puffed? I am not now confining this question now to the specific article patented, as you seem to have understood in the last answer. I am describing an article of puffing, and ask you whether such an article could or could not be made upon the machine 3000, denuded of the arched guide?

(Same objection as to question 122.)

A. I mean by the words "practically" or "successfully" that the

goods might be produced to some extent, and yet not to an extent and to a degree of perfection that would have value as a successful operation. I cannot answer the last question any more definitely; but in regard to the balance of the present inquiry, as stated, the conditions enumerated in regard to the production would doubtless exist. I mean flattened borders, with fluting within, and irregular waved or crinkled central portion between the fluting; and I will not pretend to say but that such trimming cou'd be made on such a machine, provided some device substantially different were substituted in place of the arched guide on such a machine, and the same be done
135 successfully; but I do say and believe that were no guide used, nor any mechanical device in its stead, but the goods controlled and guided by one's hands or fingers alone, to and into the machine, then, while goods very similar—indeed, so similar that it would be difficult for me or any one to distinguish short or small pieces of the same, produced in a single row from a like production with the employment of a guide, nevertheless, such machine, under such circumstances, would not practically produce the trimming or fluted puffing inquired about for the purposes of the market.

The reason why I say not successfully is because the trimming so produced would be liable to constant variation and irregularity of breadth of material in the fluted puffing; it would be liable to be varied in its lateral direction of feed; the fluting would be irregular, and so would be the flattened borders, in consequence of the variation in the location of the grasp and guide and manner of holding the material by the hands. And, therefore, I say short pieces of a single row might be found which in their appearance would strongly resemble the accuracy of construction produced with a proper guide, yet in a piece of considerable length, say a yard or several yards, there would necessarily exist, I think, so many imperfections that such a production would be a practical failure; and this would be the case in a much greater degree were the goods to be produced in two or more rows in breadth.

X 211. Look at defendants' exhibits from J to O, and state whether, in your opinion, any one or more of them were made by using the arched guide; and if you say any one of them were made by the aid of the arched guide, state which of them was so made.

(Same objection continued.)

A. I am not able to say positively any one of these was or was not made with the employment of the arched guide; but I don't believe J was, nor K; L might have been, but, by close examination, I
136 doubt it. The same is true of M, likewise of N, and probably of O. Still, I would not be positive that O, N, L, M, or indeed any of them, may not have had the arched guide on when they were made, or the goods might not have passed through the arched guide in some condition. Yet, by close examination, my impression is, that if the arched guide was used at all, it was not used in a condition to control and guide the fabric properly for the best result.

X 212. I would now ask you to state what part of the machine patented 3000 makes the flattened borders.

(Objection continued.)

A. The annular bands or surfaces B′ and the pressers or smoothers D, which are adjusted by set-screws in a horizontal bar on the rear of the frame.

X 213. What part of the machine makes the flutes mentioned in the puffing?

(Objection continued.)

A. The rings of fluting-meshes on the inside of the bands or surfaces above referred to.

X 214. What part of the machine makes the crinkles in the zone?

(Objection continued.)

A. The guide and the broad bands between the fluting-meshes. I will state in my above answers I referred to the requisite number of parts for a single piece or row of trimming; the same could be duplicated by the duplication of parts.

X 215. What part of the machine makes the irregular wavy surface in the trimming?

(Objection continued, and also on the ground that it is positively the same as the last question.)

A. The parts referred to in the last answer, to wit, the guide, the plain central bands, and fluting-meshes.

137 X 216. At what time in the process of making the fluted puffing are the crinkles or irregular wavy surface made?

(Objection continued.)

A. Between the time of the entrance of the material into the guide, and the time of the fluted puffing being cleared from the machine by the clearers located in the rear of the machine, or on the opposite side from the guide; in its passage through the machine, between the entrance at the guide and the discharge at the clearers, the work is performed.

X 217. Are the crinkles raised before or after the material passes through the rollers?

(Same objection continued.)

A. Neither before or after, but on and during the passage—that is to say, the material, in its proper condition, is entered between the fluting-meshes with surplus breadth, (having been guided and provided by the device for that purpose,) is pressed into irregular crinkles on its passage between the plain zones of the rollers, the length being taken up by the fluting-meshes, and the irregular form being fixed by the drying effect of the heated parts before being discharged.

X 218. If you pass the material in and through the guide alone, and arrest it before it passes into the fluting-rollers, would you be unable in that way to make the crinkled surface spoken of?

(Same objection continued.)

A. That would be like putting your grist in a hopper and locking the hopper, or by conduit discharging the wheat to waste, and not into the mill; of course not.

X 219. I understand you, then, to say that the arched guide in this machine performs the office of a hopper to a mill?

138 (Same objection continued.)

A. Yes, in a sense of regulating, guiding, and controlling a proper supply.

X 220. I will now ask you whether the action of heat in the use of the fluting-rollers is necessary to make the crinkles in the puffing.

(Same objection continued.)

A. No; not to make, but to fix when dampened and starched material is used.

X 221. Will not the crinkles produced in the article starched and dampened, and which you say are fixed when the material is dampened and starched, disappear when washed—or, in other words, will they not wash out when the starch is washed out?

A. I do not say they are fixed when the material is starched; I say

they are fixed by the drying effect of the heated rollers. Of course, when wet or sufficiently dampened, the conformation will disappear.

Redirect:

Q. 222. Referring to cross-question No. 43, what do you understand by the words "simultaneously," as therein used?

(Objected to by defendant's counsel, on the ground that it is not a proper question on the redirect examination, as it was not new matter brought out in the cross-examination, but the expression is used in complainant's patent, and constituted the subject-matter of the direct examination.)

A. Producing a trimming adapted to shirt-bosoms or for other purposes of dress, of single rows, or two or more rows in breadth, each row being distinguished by plain bands or flattened borders, with regular rows of fluting running along their inner edge, and said fluting
139 being separated by a zone or space of crinkled, gathered, or irregularly waved surface; the same being produced at one operation upon a properly prepared material passing through, under, by, or over a guide, or some analogous device that guides and controls in taking in the breadth and delivering to regular fluting-rollers, which by them is acted upon, and in conjunction with other parts caused to assume the form and construction fully described by me in previous answers, and then delivered from said rollers finished and complete, adapted to and ready to receive stitching in the flattened borders.

(Answer objected to on the same grounds as the question is objected to.)

Adjourned to 7th inst., at 11 a. m.

MONDAY, *October 7th*, 1872.

Present, counsel as before.

Continuation of the testimony of Samuel P. Kittle.

Q. 223. In your answer to cross-question 16, you state that a trimming regularly gathered, regularly crinkled, regularly puffed, or regularly shaped in the form of diamonds or hearts or triangles, would be different from that described in the re-issued patents. Now, if a trimming had its surface irregularly gathered, or crinkled, or puffed, or shaped, and at the same time such irregular features were repeated so as to be regular in that respect, would such trimming be within the re-issued letters-patent Exhibit re-issue 3001?

(Objected to by defendants' counsel, on the ground, first, that there is nothing in the cross-question and answer thereto to authorize a redirect examination, or to authorize this question. Secondly, on the
140 ground that the question is a pregnant one, and therefore manifestly improper.)

A. It would.

Q. 224. In your answer to cross-question No. 34, you state that the invention means the making of a new article. Do you use the word "making" as in any way equivalent to or meaning a process by which made?

(Objected to by defendant's counsel, on the ground that it is improper under the cross-examination, and on the grounds heretofore set out in the objections to the several questions.)

A. No, not in connection with the patent "Exhibit Re-issue 3001."

Q. 225. As to the patents sued on in these suits, "Exhibits Re-issue 3000 and 3001," is not the article of trimming of fluted puffing described in each of said patents, and is not one patent, re-issue No. 3000, for a

particular method or mechanism for making such trimming, and is not the other patent, re-issue 3001, for the article made?

(Objected to for the grounds above stated, and the additional grounds that the question is leading. The grounds above stated, and when hereafter used, refer to the grounds stated in the objection heretofore made to the redirect examination.)

A. The trimming is described in both patents referred to, and the "Exhibit, Re-issue 3000," is for a particular method for making such trimming, and the "Exhibit, Re-issue 3001," is for the article made or manufactured.

Q. 226. Is or is not the patent "Exhibit, Re-issue 3001," exclusive of any particular means for producing the article therein described?

141 (Objected to by defendants' counsel on the grounds above stated, and defendants' counsel notifies counsel for complainant that he claims the right to cross-examine this witness upon all the answers of witness to the questions put in this redirect examination.)

A. I think so, and I think I have testified to that fact before in this examination.

Q. 227. You state, in answer to cross-question 130, that when the patented puffing described in re-issue No. 3001 is made in single rows that the flattened borders are intended to receive the stitching mentioned, and by which to attach a puffing or trimming to an article of dress. Is not such stitching along the flattened borders intended primarily and chiefly to render permanent the conformation of the puffing? Please refer to the patent "Exhibit, Re-issue 3001," and state where any such allegation can be found therein, if at all.

(Objected to by defendants' counsel, on the grounds above stated, and on the ground that all these matters now inquired into was matter that was or should have been inquired into on the direct examination.)

A. It is intended primarily for that purpose.

I refer particularly to the words of the specification "Exhibit, Re-issue 3001," in the seventh paragraph, third line of the paragraph, "to the portion lying between the flutes, longitudinal rows of stitching, S, being afterwards, it may be, passed through the flattened borders H, at, say, their edges, to render permanent the conformation of the puffing, and if necessary, strips or tapes, basted on or along such flattened parts." I also refer to the two last lines of the claims.

(Complainant's counsel offers in evidence three pieces of puffing, which are marked "Exhibit, lace fluted puffing, October 7th, 1872, R.

142 E. S., ex'r;" "Exhibit, bound alpaca fluted puffing, October 7th, 1872, R. E. S., ex'r," and "Exhibit, piped alpaca fluted puffing, October 7th, 1872, R. E. S., ex'r." Defendants' counsel objects to the introduction of the above-mentioned exhibits, on the ground that they are improperly introduced on this redirect examination; that they should have been introduced, if admissible at all, on the direct examination.)

Q. 228. Look at the specimens of trimming now shown you, marked "Complainant's exhibits, lace fluted puffing, bound alpaca fluted puffing, and piped alpaca fluted puffing," and state whether such exhibits, or either, or which of them, illustrate your answers to cross-question' 129, 130, and 131; and if so, how they illustrate the same.

(Objected to by defendants' counsel, on the grounds above stated; and notice is given to complainant's counsel by defendants' counsel, who claims the right to cross-question the witness on the exhibits now introduced, and his answers referring to the same.)

A. The Exhibit lace fluted puffing illustrates how it is stitched

to render permanent the uniformity of fluting, gathering, or puffing in an article where tapes are not used, and where a number of rows of trimming are used in a piece and connected only at the outer rows to an article of dress.

The "bound alpaca" and the "piped alpaca" exhibits of fluted puffing illustrate how the stitching render permanent the single rows as they may be used when not attached or connected to an article of dress.

Q. 229. Look at the exhibits referred to in the last question, and answer and state whether or not such exhibits illustrate stitching along the flattened borders for other purposes than to attach or connect the trimming to articles of dress; and if so, for what purpose.

143 (Same objection by defendants' counsel.)

A. They do illustate stitching along the flattened borders, for the purpose of rendering permanent the conformation of the fluted puffing.

Q. 230. Look at defendants' "Exhibit, Werner Patent No. 4500," and state whether or not the V-shaped ruffles or folds are illustrated in the drawing thereof as uniform in breadth and length.

(Objected to by defendants' counsel, on the ground that the language of the patent is that the row of ruffles or folds of V-shaped is said to be of greater or lesser regularity.)

A. They are. I quote, "As indicated in fig. 1."

Q. 231. In answer to cross-question 199, "Is the guide mentioned any part of the fluting-rollers mentioned in re-issue patent 3000, or is it a separate instrument?" You use the words, "A separate instrument or device." Do you mean to be understood by your said answer that it is necessary that the guide should be separate from the fluting-rollers, and could not be made a part of such rollers?

A. No: I have known of a machine in which there was a device located between the fluting members on the rollers, that performed the office of the guide, so far as controlling and directing the requisite amount of material required to be taken up in breadth, to afford the puffed central zone, to wit, the device afforded greater breadth of material between the fluting members than a direct line; that machine was an exhibit in the case of King vs. Mandlebaum, tried in this court. I answered the question 199, referred to, in reference to the specific machine described in "Exhibit, Re-issue 3000."

(Answer objected to by defendants' counsel, on the ground that it discloses new matter not brought out on the cross-examination, and

144 for that reason defendants' counsel moves to have that part of the answer that refers to the Mandlebaum suit stricken out.)

Q. 232. In cross-questions 202, 204, 206, 208, 209, 210, and 211 you were asked concerning the use of the arched guide. Do you understand that the expression "arched guide," as employed in those questions, implies that the guide must be arched upwards?

(Objected to by defendants' counsel, upon all the grounds above stated.)

A. No.

Q. 233. What do you consider to be understood by the expression "arched guide" in the several cross-questions referred to in the last question?

(Objected to by defendants' counsel, on the ground that the "arched guide" is what the complainant claims in his patent, and any examination in relation thereto by complainant should have been in his direct

examination. There is nothing brought out by the cross-examination by the questions referred to to authorize a direct examination.)

A. The thing or device described as guide E, in "Exhibit, Re-issue 3000," the object and purpose of which is described as follows, commencing on the second paragraph on the second page of the written specification of said exhibit.

The essential purpose of which is set forth in the language I quote, commencing in the fifth line of the paragraph: "In such manner that the width of the fabric passed between each pair of the plain portions C′ will be greater if stretched out to its full extent than the width of the said portion, so that the said fabric, by means of its increased width, will be crinkled or puffed in passing between the afore-
145 said portions C′." Again, I quote in the fourth paragraph of the second page, commencing at the fifth line: "At the same time that those portions of the fabric drawn through the curved or arched parts *a′* of the guide E, being, if stretched to their full extent, of a width greater than that of the smooth cylindrical portions C′, and being also gathered by the fluting on their sides or edges, are caused to assume a crinkled or puffed form, as they are passed between the aforesaid portions C′, the distance between the opposite smooth portions C′ aforesaid being such that no pressure is exerted upon the fabric passing between them beyond that required to simply press the convex surfaces thereof downward to a sufficient degree to insure the shaping thereof into the puffed condition herein described.

"The extent to which the material will be thus contracted laterally, as it were, or drawn up between the flutes, will be governed by the excess in length of the arched portions *a* of the guide over a straight line or lines, connecting such arched portions at their base.

"By these means the fluted puffing is brought into the form required in the finished article without the necessity of washing the same in order to bring the puffing into such form."

Taking the above language in connection with the following words of the inventor in his declaration of the invention in the seventh paragraph, first page, commencing at the second line: "Is fluted and contracted, laterally as it were, or drawn up between the flutes, to produce the required crinkled surface or surfaces in the puffing."

And in connection with the words in the last line of the claim: "Substantially as herein set forth, for the purpose specified."

In such manner the thing that accomplishes the required result in such manner, or substantially in such manner, it always being for the purpose specified, that is to say, contracts or draws up the material in the required place, and to the required fullness, and for the re-
146 quired purpose, must be the same thing; if it does not do it substantially different in manner, or if the thing has not a substantially different purpose, or produce a different result from that specified, it must be the same thing, or substantially the same; though it might have a different form, it would not be mechanically different when combined and operated as above for the purposes specified.

(Answer objected to by defendants' counsel, on the ground that it is not responsive to the question asked, and consists of a description of the puffing, when completed, as patented in "Exhibit, Re-issue 3000;" and the manner of making the same by the machine; and is improper at this stage of the case; and defendants' counsel therefore asks that same may be stricken out.)

Adjourned to 14th inst., at 11 a. m.

MONDAY, *October 14th*, 1872.

Present, counsel as before.

Continuation of the testimony of Samuel P. Kittle.

Q. 234. Look at the paper marked "Exhibit standard puffing, September 26th, R. E. S., ex'r," and state whether you find on such exhibit any figure which, in your opinion, illustrates an article of fluted puffing, such as is described in complainant's patent, "Exhibit, Re-issue 3001;" and, if so, please mark such figure with your name, and the date October 14th, 1872.

(Objected to on the grounds above stated, as the only figures offered in that exhibit are marked from 1 to 14, inclusive.)

A. I have looked at such exhibit, and find at the bottom of the
147 sheet a figure which I have marked as requested, it representing the new article of manufacture patented in "Exhibit, Re-issue 3001."

(Answer objected to by defendants' counsel, on the grounds above stated.)

Q. 235. If a piece of trimming such as you have marked, in that exhibit "standard puffing," with your name was washed and laundered, and then a cut or figure of such goods so laundered was made, would such representation of that trimming be like the trimming shown in the figures from 1 to 13, inclusive, in such exhibit?

(Objected to on the grounds above stated.)

A. It would.

Q. 236. You have been inquired of as to certain representations of flutings, rufflings, or puffings, shown in various cuts and figures in books Exhibits D, E, F, and G. Do any of the flutings, rufflings, or puffings shown in such cuts or figures illustrate a trimming having regular flattened borders, with rows of regular fluting inside of such flattened borders, and having between such rows of regular fluting a zone or space of crinkled, gathered, puffed, or irregularly-waved conformation?

A. They do not.

Q. 237. Your attention has been called to some pieces of trimming attached to a paper marked "Defendant's exhibit H," two of which pieces are marked "A" and "B," respectively; and in your answer to cross-question 128 you generally described the piece marked "A," and then say "B is like A," with certain exceptions mentioned. In what respects do you mean to say B is like A?

A. It is like A when considered as a genenal configuration on its top side. B is like A as regards one row of fluting alone, or one side separately considered, having a waved, crinkled, or gathered centre bounded by regular rows of flutes on either side.

I do not mean to say that it is alike in uniformity of fullness and
148 centre zone, nor in having regularly flattened borders, nor in being made in single rows and stitched together, nor in being deficient in any stitching at all on the parts outside of the regular rows of flutes.

Recross:

X 238. You were asked on the redirect examination, question 223, "Now, if a trimming had its surface irregularly gathered, crinkled, or puffed, or shaped, and at the same time such irregular features were repeated so as to be regular in that respect, would such trimming be within the re-issued letters-patent, 'Exhibit, Re-issue 3001?" to which you answer, "It would." Do you mean to say that the only difference between other puffings referred to in the first part of question 223 and the

puffing of the re-issued patent 3001 is that the puffing patented 3001 has its surface irregularly gathered or shaped or puffed, and the other would be regularly gathered, shaped, or puffed?

A. Yes; I mean, were all the parts made in conformity with the specification to which cross-question 16 referred *to*, as answered by me to question 4, and the central portion had the characteristic of irregularity of waves or crinkles or gathers, although that irregularity might be repeated in regular lengths or distances, yet the fact of irregularity existing in combination with the parts as explained would make it the puffing described and patented in "Exhibit, Re-issue 3001" in contradistinction to a puffing having a regular configuration or embossed or stamped centre portion bounded by regular rows of flutes and regular flattened borders on their outside.

(Defendants' counsel moves to strike out all the answer after the word "yes" as not responsive.)

X 239. Look at Exhibit lace fluted puffing, and state whether you see the flattened borders on that puffing mentioned in the patent 3001.

A. I do, and a line of stitching in them besides. I do not pre-
149 tend to say, however, that the flattened borders are as broad as those illustrated in the patent "Exhibit, Re-issue 3001;" but I do say that they are there, and that they are there for the purpose of receiving stitching, and that the stitching is in them for the purpose of rendering permanent the conformation of the fluted puffing.

X 240. Do you know whether this exhibit was made upon the complainant's machine, patented 3000?

A. I do not.

X 241. Do you know whether Exhibit bound alpaca fluted puffing was made on the complainant's machine, patented 3000?

A. I do not.

X 242. You do not know, then, whether an arched guide was used in making this Exhibit lace fluted puffing?

A. Not having seen it made, I could not state from knowledge, but I believe that both the "lace" and "alpaca," from their appearance, were made on a machine in which the arched guide, or its equivalent, was employed.

X 243. Could the arched guide, in combination with the fluting-rollers of complainant's machine, make the article Exhibit lace fluted puffing without the aid of any other mechanism, practically and successfully?

A. Yes; if you mean the fluting-rollers having the plain bands to operate with the pressers, and you mean to exclude the stitching, which is put in afterwards, for the purpose of rendering perfect the conformation of the parts.

X 244. You have attempted to state several times what function the guide performs in making the puffing patented 3001; now attempt to state what part of that puffing the guide has no part in making.

A. No part of it.

X 245. Then I understand you to say that the guide, in part, makes all the features of the puffing; am I correct?

A. You mean the puffing described in "Exhibit, Re-issue 3000," I suppose, as produced by that machine; I answer, yes, it does
150 perform a part of the work, in reference, first, in guiding to and into the fluting-rollers the material to be acted upon by each part of the fluting-rollers, and also the pressers. It does contract or take up the transverse line or breadth, and deliver to each separate zone and ring its due proportion, in proper relation, relatively, in a transverse

line, and in sufficient quantity to form and make the requisite conformation; and in that way and sense it does contribute to the making up or finish of the fluted puffing in each part, or every longitudinal member, the same as a hopper, before referred to by me, contributes to the result of the ground grain.

X 246. I wish to know whether, if you should detach from the machine patented 3000 the arched guide, and substituting no equivalent or device to represent the guide, whether or not the machine would not still make the flattened borders and rows of flutes, as represented in the patented article 3001.

A. Yes.

X 247. Then is the arched guide necessary to make the flattened borders and the rows of flutes inside of the flattened borders of the patented article referred to?

A. Not regarding the puffed centre with the relative relation of parts; no.

X 248. Can the flattened borders and the rows of flutes inside of the flattened borders be made as well without the arched guide attached to the machine above referred to as with it?

(Objected to as inquiring concerning the construction of an article which is not described in the patents sued upon, and concerning which no issue is raised in these cases.

Defendants' counsel says the object of asking this question is to try to render less ambiguous the answers given to the several last questions, commencing at the answer to question 245.

Complainant's counsel states that he does not consider the answers ambiguous in reference to the questions put.)

151 A. Yes, excluding the puffing before referred to by me, in answer to question 247.

X 249. You have stated that the guide can be part of the fluting-rollers, and refer to an exhibit in the case of King vs. Mandlebaum, tried in this court; does the device in that case act the same way as the guide of the patented machine 3000?

(Objected to as manifestly inquiring of new matter and concerning a machine which has not been introduced in evidence in these cases by either party, and also concerning a machine the operation of which has been passed upon by the court, and is not a subject of inquiry or review in the present cases.)

A. So far as taking up the breadth of the strip of material and raising up the puffed centre, and locating the longitudinal sections under the fluting meshes and pressers, it does.

X 250. Then you consider any device that affords greater breadth of material between the fluting-meshes than a direct line a guide or a device in the nature of a guide, and as performing the function of the guide patented in "Exhibit, Re-issue 3000?"

A. Any thing or things that is or are introduced for that purpose, and operates in substantially the same manner, and produces the same result as a mechanical construction and operation, I consider the same.

(Counsel for defendants objects to the answer as evasive, and as not answering the last question, and moves that the same be stricken out.)

X 251. Cannot you answer question 250 yes or no?

A. Yes; with the above explanation, I do answer yes.

X 252. Cannot you answer it yes or no without any explanation?

A. Not satisfactory to myself.

152 X 253. You have stated, in answer to question 231, that the guide can be located between the fluting meshes on the rollers;

state whether a guide can be placed in the rear of the rollers, so as to perform the functions of a guide in making the puffing patented 3001.

(Objected to as irrelevant and immaterial.)

A. There might be a part of a guide located in the rear, and part in front, which parts put together might perform very completely the functions of the guide located in front: that would be true particularly if the portion placed in the rear should extend to and between the rollers to raise up, or act to raise up, or take in the breadth of material, and raise up the centre zone of irregular waved part; but I would not say, without having a machine or device before me, with a guide located wholly in the rear of the rollers, that there could such a result be produced by a guide located there.

X 254. Can't you answer this last question yes or no?

A. I can't say yes or no positively to that.

S. P. KITTLE.

Sworn and subscribed to before me this 14th day of October, 1872.

R. E. STILWELL,
Examiner, &c.

153 U. S. circuit court, southern district of New York.

GEORGE E. KING
against
ALEXANDER LYLE.

GEORGE E. KING
against
ROBERT WERNER.

GEORGE E. KING
against
ADOLPH HERMANN AND SIMON LAUTERBACH.

Testimony taken, on part of complainant, in rebuttal, under and in pursuance of the sixty-seventh rule of the Supreme Court, as amended.

SATURDAY, *January 17th*, 1874.

Present, S. D. Law, esq., counsel for complainant, and Orlando Dorsey, esq., counsel for defendants.

154 MANUEL A. KURSHEEDT, being duly sworn as a witness on part of complainant, deposes and says as follows:

Q. What is your name, age, residence, and occupation?

A. Manuel A. Kursheedt; thirty-three years of age; residence, New York City; occupation, attorney and counsellor at law.

Q. Are you the complainant's solicitor in this suit?

A. I am.

Q. Enquiry has been made in these suits in reference to an affidavit made therein, by Caroline Weitling, on the 23d day of April, 1872. State whether you had an interview with M'r's Weitling, at her request, in reference to such affidavit before the time she was examined as a witness in these causes? and, if so, state where that interview was had: about when, and what took place at that interview, and what M'r's Weitling said with reference to that affidavit.

(Objected to on the ground that the affidavit mentioned must be pro-

duced and identified as the specific affidavit referred to, and on the ground that if it is the intention of counsel to impeach the testimony of the affiant as a witness in this case, the question is incompetent.)

A. On the 23d of April, 1872, or within a very few days thereafter, I received from M'r Dorsey, defendants' counsel, a copy of an affidavit of Caroline Weitling, which affidavit he, as solicitor for defendants, in the suit above entitled, of King vs. Hermann & Lautenbach, served upon me, as complainant's solicitor in said suit. The said copy affidavit I now hold in my hand. About three weeks thereafter I called, with the complainant, by appointment, at the office of M'r Ropes, and met there M'r's Weitling. The copy of affidavit above referred to was shown to M'r's Weitling, then and there, and read over to her carefully. M'r's
155 Weitling stated that after she had made the affidavit, of which she then saw the copy, she felt uneasy because she had not understood the contents of it before she swore to it, and she thought she had sworn to matters in it that were not true, and therefore asked M'r Ropes to request M'r King and his lawyer to meet her, so that she might have an opportunity of making an explanation and correction. It was in consequence of that request that the complainant and myself met her on that occasion. She stated to me then, also, that the fluted puffing mentioned in said copy of affidavit had never been sold in the public market, in the city of New York, and that the allegation in said affidavit that such puffing had been sold in the public market in the city of New York was wholly untrue. This conversation took place several months before the commencement of the taking of M'r's Weitling's evidence in these suits. She further mentioned that the piece of puffing annexed to said copy of affidavit, and marked "A," had been made by her recently, and at the request of M'r Dorsey.

(Complainant's counsel puts in evidence the copy affidavit produced by witness, and which was read by him to M'r's Weitling, in the interview spoken of, and the same is marked "Complainant's Exhibit, copy Affidavit, April 23d, 1872.")

(Same objection to answer as to question.)

Cross-examined by Orlando Dorsey, esq.:

Q. Was your conversation with M'r's Weitling in German or in English?

A. It was in English.

Q. Did M'r's Weitling read the paper which you have been pleased to style "Copy of an affidavit"?

A. I am not sure that she did, but she held it in her hand for some time and appeared as if she might be reading it.

Q. Can M'r's Weitling read English, to your knowledge?

156 A. I know nothing on the subject, whether she can or whether she cannot.

Redirect:

Q. Whether M'rs Weitling can read English or not, and whether she actually read the copy of affidavit which she held in her hand, you are certain, are you, that that copy of affidavit was carefully read to her at that interview?

A. I am.

(Question and answer objected to, as it has been already asked and answered.)

I remember distinctly that the paper was read slowly to her by M'r Ropes. I was then very familiar with the contents of the affidavit and knew that M'r Ropes read it correctly, and M'r's Weitling interrupted

several times with observations, showing she knew what was being read.

Q. What knowledge have you as to M'r's Weitling being able to understand the English language, even though she may not be able to read it?

(Objected to on the ground that the witness has not been proved to have been an expert in languages.)

A. On the occasion above referred to the conversation lasted some time, and she expressed herself very clearly in English. Her answers were full and evinced a thorough understanding of the questions that were put to her. I have met her since then several times, at this office, and conversed with her in English, and she spoke quite fluently. The early part of her testimony in this suit was taken without an interpreter. I am frequently brought in communication with Germans and converse with them in English, and am familiar with the way in which they express themselves in English.

157 Recross:

Q. Did you on the occasion of the interview speak to M'r's Weitling in German?

A. No, sir.

Q. Is your memory sufficiently informed to state whether or not in the course of the examination in these cases she did not desire to have an interpreter, on the ground that she did not sufficiently understand English to comprehend satisfactorily the questions asked her, and that she could not speak English sufficiently well to express in that language what she wished to say?

(Objected to as enquiring what was stated by her, and is, therefore, manifestly hearsay.)

A. She said, on the occasion you refer to, which I think was the second or third day of her examination, something to the effect stated in the question, adding that she understood English tolerably, but was not familiar with enough words to express her meaning fully and accurately as she wished, under oath.

M. A. KURSHEEDT.

Subscribed and sworn to before me this 17th day of January, 1874.

R. E. STILLWELL,
Examiner, &c.

158 FRIDAY, *February 27th*, 1874.

Present, counsel for respective parties.

SAMUEL P. KITTLE, recalled on part of complainant, testifies as follows:

Q. 1. Have you examined the following exhibits in these causes, being those marked "Exhibit, Weitling Machine, Exhibit, Weitling Spindles, Exhibit, Weitling Rings, Exhibit, Weitling Board, Exhibit, Weitling Standard, and Exhibit, Weitling Bar," and have you considered said exhibits in connection with the exhibit marked "Exhibit, Weitling Application, November 13, 1872, R. E. S., Exam'r," and with the testimony of the defence in these suits, and do you understand the construction and operation of said exhibits, and have you examined the exhibits, "Robjohn Machine," and "Robjohn guides," and "Defendants' Exhibits S and T," and have you considered in connection therewith the letters-patent, marked "Exhibit, Robjohn Patent," and the testimony of the defence herein, and do you understand the construction and operation

of said exhibits, and have you examined the exhibits marked "Exhibits, Muller, Nos. 1, 2, 3, 4 and 5," and have you considered the same in connection with said testimony, and do you understand the construction and operation of said Muller exhibits?

A. I have examined the several exhibits referred to in the question, and believe I understand the construction and operation of all of them; and I have also read the testimony of the defence bearing on the same.

Q. 2. Do you find in either of the exhibits mentioned in the last question the invention described and patented to the complainant in "Exhibit, Re-issue 3000," and give your reasons for any opinion you may express?

A. I do not find the invention patented in "Exhibit, Re-issue 3000," in any of the machines or exhibits enumerated in the question. The machine, "Exhibit, Weitling Machine," described in the "Exhibit, Weitling Application," and illustrated in the drawing attached to the said application, is a crimping or embossing machine,
159 illustrative of the state of the art at the date of said application, March 8, 1855, and when viewed, as described and illustrated in said application, presents a frame with two hollow spindles mounted in proper bearings in said frame, and provided with crimping or embossing rings on said spindles, and with fluting rings which mesh into each other, and said spindles geared together by said fluting-rings, the spindles being hollow for the reception of heating-irons, and one of them provided with a crank whereby they may be revolved in opposite directions, for the purpose of drawing into and through between the several rings and the configuration placed thereon; the material to be figured or embossed as printed, in accordance with the face of the rings acting upon said material. There are represented and described in the specifications and illustrations of the application, three washers placed between the several rings, which are represented in the rejected application of the patent of August 27, 1872, as being used to fill out the space between the shoulders at the spindles, and the screw at the end of the spindles, so as to secure firmly between said screw or rest and the shoulder on the spindle, and thereby press and hold firmly the rings with the figured or embossing faces. In view of the testimony given by the defence in regard to this machine and the rings, and other articles or devices introduced in connection with the machine, the illustration of the state of the art thereby presented is quite different from that presented in the Weitling application before referred to. The machine described and illustrated, as I have before said, in the "Exhibit, Weitling Application, November 13, 1872, R. E. S., Examiner," would produce on material starched and dampened or prepared, several lines or belts of regular crimped or stamped figures, which would be imparted type-like to the face of the goods, (with the exception of the narrow lines of space created by the washers interposed between the rings;) that production would represent the kind of trimming known in 1855.

Provided we consider the machine "Exhibit, Weitling Ma-
160 chine," as represented in the defendants' testimony, and by the exhibits, board, standards and bar, the machine being secured, as was represented in the testimony, to the board by screws, and the standards sustaining the bar located immediately in front of the same, as the screw-holes in the board and in the iron frame indicate that it was secured, then we have a somewhat different construction, but still in neither case do I find the invention described in the "Exhibit, Re-issue 3000."

In the construction and operation of the machine described in "Ex-

hibit, Weitling Application," I do not find the guide E, constructed with one or more curved or arched portions in combination with suitable fluting-rollers, adapted to produce a fluted puffing such as described in re-issue 3000. The machine described in "Exhibit, Weitling Application," makes simply an embossed or crimped goods, whereas the "Exhibit, Re-issue 3000," is constructed and adapted to the production of a goods characterized by flattened borders, or plain bands, with regular rows of fluting lying within the same, and within the flutings a central zone of irregularly puffed or wavy surface.

The construction illustrated and described in "Exhibit, Weitling Application," is not capable of producing such trimmings. Neither would the machine "Exhibit, Weitling Machine," with the exhibits, board, standards, and bar, with spindles and rings as constructed and arranged, and represented and described by the defendants' testimony, produce a trimming, when operated, that would contain flattened borders with regular rows of fluting within flattened borders, with a zone lying between the rows of fluting of irregular or wavy surface, for the reason that it is defective and inoperative for such purpose, not having a guide in front of the broad zone, lying between the regular fluting rings, which would guide and control the material fed into the machine, so as to afford an increased breadth of material at that point, which is requisite in order to secure the irregular wavy surface in that part of the trimming.

Supposing the machine "Exhibit, Weitling Machine," to be
161 fixed to the "Exhibit, Weitling Board," by screws at the four corners of the iron frame of the machine, and suppose the exhibit, standard, to be morticed in and secured to the board as represented, and the corrugated bar located in the standard, and all fixed and operated together as shown, described, and represented, then what has been represented in the defendants' testimony as an equivalent to the arched guide, in the plaintiff's machine, to wit, the arched portions of the bar, will in no case fall in line in front of or over the plain zone or broad space, lying between fluting rings, so that the knobs or raised corrugations on the "Exhibit, Weitling Bar," cannot be said to be an equivalent in purpose, position or operation to the arched guide of the plaintiff's machine, as described in "Exhibit, Re-issue 3000," and in examining the "Exhibit, Weitling Rollers," which are filled with embossing rings and washers, I find that the location of the rings on said spindles, were the spindles mounted in the machine, could not be placed so as to afford rings for flattened borders, regular rings of fluting, a broad zone for puffing, and rings for fluting, and rings for flattened borders outside of and adjacent thereto, and the same in duplication, without modification of breadth, in the duplicated row of puffing of a character described in "Exhibit, Re-issue 3000," from the fact that there is an irregularity in the breadth of the knobs in the line of the corrugated bar; but where said bar provided with the knobs or corrugations properly located in front of the plain zone, between the regular fluting meshes, still it would not be the guide in construction, adaptation or mechanical application, nor in any way an equivalent for the guide, represented as described in the "Exhibit, Re-issue 3000," for that guide not only possesses an arched or crowning surface, but it also possesses a cap of corresponding form, which acts with its counterpart to receive and control the goods in line before the plain zone, (which is located between the fluting rings,) but also to contract the breadth of the material at the arch, so as to present a greater breadth of material or goods, to and into the fluting rollers over and between the zones

162 of the same, which is bounded by the regular fluting meshes on either side, and also to present the same depressed into the cavities by the side of the arch, or arches, in just sufficient quantity in its cross line for the fluting, and for the plain band, each in its proper proportion for the result desired, to wit: sufficient for the plain band, for the fluted row, for the puffed center, for the opposite fluted row and plain band, and the same in duplication, regularly and uniformly.

The machine illustrated and described in "Exhibit, Weitling Application," specifies an improvement in fluting and crimping cylinders, whereon the desired configuration was fixed on the rollers, so that each style of goods required a separate pair of cylinders or rollers.

The inventor, Weitling, according to his description, devised a plan of applying various rings or bands, with designs on their exterior, which he could slip on and off a pair of cylinders, or secure them on the same for the purpose of varying the pattern without requiring new cylinders for each separate pattern, and it does not appear that he contemplated in his construction of machines or rings any combination of rings, for the production of fluted puffing or kind of trimming, described or produced in either of the "Exhibits, Re-issue 3000," and re-issue 3001.

I have examined "Exhibit, Robjohn Machine," and the folding device connected therewith, and also the "Exhibit, Robjohn Patent," and have read defendants' testimony bearing upon the same. The machine consists of a pair of fluting rollers, mounted in a frame; the fluting rollers meshing into each other, so that when one is revolved it carries the other around with it in an opposite direction. The improvement set out and claimed by Robjohn, in the "Exhibit, Robjohn Patent," consists in the combination, with the pair of well-known fluted rollers, properly mounted in a frame and operating together, of a folding device or tube being connected with a pressure-guide which is mounted on a bar or table, which table is secured to the frame of the machine. The inventor di-

163 vided his improvement in four parts: first, the combination with the fluted rollers of a folding-guide so constructed as that the strip of muslin or other goods being passed or drawn through it, the outer edges are turned up over and meet at the inner end of the tube, turning the outer edges of the strip of goods over on to a central longitudinal line at the inner end of the tube or guide.

A second part of the invention he describes as consisting in the combination of the fluting machine and folding guide, an interposed pressing guide, which pressing guide he describes and illustrates as presenting an aperture at its centre, each adapted to receive the inner end of the guide, and tapering down to its inner end to an elongated slot or aperture of just sufficient diameter to pass the double thickness of goods that is to be fluted.

The third part of his invention has reference to the formation of a socket for the reception and holding of the folding guide.

The fourth part of his invention he describes as consisting of a combination, with a fluting machine, of the folding guide, constructed to turn in the two edges of the muslin or other material on the same side of the strip.

The improvements illustrated and described by Robjohn do not embody the construction, nor arrangement, nor combination described and illustrated in the "Exhibit, Re-issue 3000."

In the first place, the fluting rollers are not provided with an outer plain band having a regular row or band of fluting meshes adjoining, and within which, in turn, there is a broad zone or plain space which is bounded by another regular row of fluted meshes, having beyond it a

plain band; the plain band being the first on the line of the axis of the fluting roller is not found in the "Exhibit, Robjohn Machine," neither is a presser or smoother found in said machine adapted to or bearing upon such plain band. In said exhibit the fluting meshes run the whole length of the rollers, with the exception of four brakes or annular grooves, which cut them off in the circumference of the rollers.

164 In the two central brakes or grooves of the rollers there are two spring bars to brake down the material as it is fed through between the rollers and fluted by the fluting meshes, and back and behind the lower roller there are two clearers in the two central grooves or brakes of the flute. This construction is not analogous to the construction described and illustrated in the complainant's Exhibit, Re-issue 3000, and would not produce the goods therein described.

The folding and flattening guides are arranged and located upon the table or bar, which is secured to the frame of the machine in front of the fluting rollers, horizontally in line with their contact. The centres of such folding and pressure guides are located in line with the before described grooves, to wit: The two center brakes or grooves of the fluting rollers, so that the enfolded edges of the material will be led into and under the curved presses which bear upon the centre grooves of the lower rollers.

The purpose of the construction and arrangement of the parts of "Exhibit, Robjohn Machine," as illustrated and described in "Exhibit, Robjohn Patent," is to manufacture double-fold ruffles, two at a time. There is no provision in the machine or guide, so called, for taking in the breadth of the material in its cross-section, nor is there any provision in the construction or description for affording a puffed or irregularly waved centre in goods to be operated upon in said machine, much less any provision for producing an article of manufacture, characterized by flattened borders on its outer edges, adapted to be stitched with a sewing-machine, or otherwise, with regular rows of fluting within said borders, separated by a zone or space of irregularly waived or crinkled surface; neither is there found in said "Exhibit, Robjohn Machines," "Exhibit, Robjohn Guides," nor "Exhibit, Robjohn Patent," any arched guide, the purpose and office of which is to guide and to control a strip of muslin or other goods to be operated upon by the machine, so as to lead and guide a proper amount of goods in breadth—to form two

165 flattened borders, two regular rows of fluting within the flattened borders, and a surplus between said borders, and rows of fluting more than equal to a plain zone which separates the rows of fluting, so as to afford an irregular, wavy or crinkled surface capable of duplication. It is evident from an examination of the machine, "Exhibit, Robjohn Machine," and the "Exhibit, Robjohn Patent," that the inventor was wholly intent on a construction which combined with well-known fluted rollers would enable him to produce readily a double ruffle or two-fold ruffle in duplication, and that he had no idea or design of making or constructing a machine for the purpose of making or producing thereby a trimming of the character described and illustrated in the complainants' "Exhibits, Re-issue 3000 and 3001," or if he did, he entirely failed in description and construction.

SATURDAY, *February 28th*, 1874.

Present, counsel for the respective parties.

Direct examination of the last witness resumed:

(Answer to int. No. 2 resumed.) And the employment of the Exhibits S or T, in connection with said "Exhibit, Robjohn Machine," would

not enable the operator to produce on such machine a trimming like or substantially like the trimming Exhibit 3001, neither are the Exhibits S and T mechanical devices that can be said to be substantially like, in construction and operation, the arched guide described in the "Exhibit, Reissue 3,000." I have examined the exhibits marked "Exhibits, Muller, Nos. 1, 2, 3, 4 and 5." Exhibits No. 1 and 2 are embodied in No. 5, and, agreeably to the defendants' testimony, are corrected representations of the same exhibits. Nos. 3 and 4 are a pair of diamond embossing rings adapted to a spindle or fluting-roller spindle, and to be used on the same to make a diamond-formed figure on trimming. The

166 guide 5, with the knob, is an implement which when used on a machine to lead muslin or other material to the embossing rings, if it were so located in front of the rings 3 and 4, the same being properly revolved on cylinders, and the knob and the guide being located immediately in front of the interlacing peripheries of said rings, then I think the knob on said guide would have the tendency to deliver, in consequence of its crowning form, an increased amount of goods at its inner end above what would have been delivered over a plain surface; but I am not of the opinion that it would deliver such material or goods by any means in the best manner to prevent the interlacing portion of the said embossing rings for the purpose of producing a perfect figure. Still it might perform that office passably well, provided there were not located at its sides rings of like or other interlacing character to seize and operate on the sides of the material to be embossed. I do not find in the Exhibits Nos. 3, 4 and 5, taken together with the defendants' proofs thereon, mechanical equivalents either for the arched guide E, of the complainant's E, reissue 3000, nor for the plain zones represented in said exhibit on the fluting rollers, and located in front of the arched guide. Were the embossing rings substituted for said plain zones in Exhibit 3000, and operated together upon the muslin or other material delivered from the arched guide in said exhibit, to and into the fluting meshes and the said embossing rings, would the trimming be such a trimming as would be delivered from such machine were the plain bands or zones used instead of the embossing rings, nor would the machine be such a machine as is described in Exhibit 3000.

The guide, "Exhibit, Muller No. 5," is not like the guide E, described in Exhibit 3000, not being provided with the upper or cap part, which is an essential part in the construction therein described.

I do not find in the Muller description of machine and implements the invention described and claimed in the "Exhibit, Re-issue 3000."

Q. 3. Have you examined exhibits marked "Exhibits, Weit-

167 ling Puffing," and "Exhibit, Weitling Ribbons," and have you read the testimony herein bearing on the same, and do you understand the construction and character of said exhibits?

A. I have examined such exhibits, and the testimony bearing thereon; I understand the construction and character of said exhibits.

Q. 4. Do you find in either of the exhibits mentioned in the last question the invention described and claimed in the patent, "Exhibit, Reissue 3,001," and give your reasons for any opinion you may express.

A. I do not find in either of the exhibits mentioned in the question the invention described and claimed in "Exhibit, Re-issue 3001." The "Exhibits, Weitling Ribbons," present regular embossed configurations on their surface, such as are produced by passing light goods between embossing rings secured on spindles, so that the said rings interlock and impress or imprint the configuration of their surfaces on materials passed between them, as they are revolved in op-

posite directions, whereas the trimming described in "Exhibit, Re-issue 3001," must be characterized in all cases by a central zone of irregularly crinkled or wavy form, which zone is bounded on either side with rows of regular fluting, outside of which rows of fluting are located flattened bands or borders, which may be stitched through the feed of an ordinary sewing-machine, and which material having been previously sized, or starched and dampened in passing through between rollers or rings of the proper configuration, and under smoothers or pressers for that purpose, or any other machinery adapted to produce the configuration, and said machinery being properly heated, will deliver the same in a complete and finished condition, without resort to laundrying. That is to say, I do not find in the "Exhibit, Weitling Ribbons," a representation or trimming like the trimming described and claimed in "Exhibit, Re-issue 3001."

Neither do I find the trimming described, illustrated and claimed in "Exhibit, Re-issue 3001," embodied in the "Exhibit, Weitling Puffing," for the reasons above given in this answer.

168 The "Exhibit, Weitling Puffing," appears to be two pieces of ribbons, which have been run through between embossing rings on one edge, producing configurations thereon quite similar to the configuration produced on "Exhibits, Weitling Ribbons." The part of the ribbon, "Exhibit, Weitling Puffing" which has not been passed through between the crimping or embossing rings, is gathered or taken up along the edge of the crimping or embossing, and the two ribbons at the outer or ruffled extremity having been sewed together, gives the exhibit a central puffed appearance. I notice in this prepared and fixed up exhibit, outside of the angling crimps which lie next to the ruffled or gathered edges, that there are creases lying between two lines of crinkling, but these creases are far from being the plain bands represented and described in "Exhibit, Re-issue 3001," nor do I find regular rows of fluting and irregularly waived centers next thereto, as are described in the "Exhibit, Re-issue 3001," where the same is produced in duplication, so that the "Exhibit, Weitling Puffing," if viewed as a single piece or row of fluted puffing, it is not like that described and illustrated in "Exhibit, Re-issue 3001," in its plain band borders, with the regular rows of fluting lying within the same, and the fluting separated by a zone or belt of the irregular waived surface.

If the said exhibit is considered as representing three separate rows of fluted puffing, then the two outside rows are wholly different from the fluted puffing described and illustrated in "Exhibit, Re-issue 3001," in that there is but one lien in each of the outside rows for stitching, and that crease cannot fairly be said to be a flattened border, and in that the center portion of the two outside rows can in no case be regarded as an irregular wavy surface; it being a regularly embossed or crimped space.

Q. 5 Have you examined the exhibit marked "Exhibit, Weitling Puffing, No. 2," and "Exhibit, Pipo Puffing," and have you read the testimony herein bearing upon the same, and do you understand the construction and character of such exhibits?

169 A. I have examined the exhibits referred to in the question, and the testimony bearing upon the same, and I understand the construction and character of such exhibits.

Q. 6. Do you find in either of the exhibits mentioned in the last question, (No. 5,) the invention patented and described in "Exhibit, Re-issue 3001," and give your reasons for any opinion you may express?

A. I do not find in either of the exhibits mentioned in the question, the puffing described and patented in *in* "Exhibit, Re-issue 3001." The

"Exhibit, Weitling Puffing No. 2," is like the patent trimming referred to in the irregularly wavy center portion, and the same being bounded on either sides by regular rows of fluting, but is unlike the trimming represented in "Exhibit, Re-issue 3001," in that it has not the plain bands or flattened borders running along outside the regular rows of fluting. The "Exhibit, Pipo Puffing," is unlike the article of trimming shown and described in "Exhibit, Re-issue No. 3001," in that it is deficient in the regular rows of fluting, and in the flattened bands also, and is in fact only a piece of cloth gathered along its two borders, and is very similar to the kind of puffing used on old ladies' caps, in my earliest recollection, and subsequently used on the sleeves and other parts of ladies dresses.

Q. 7. Can an article of trimming like, or substantially like, that patented and described in "Exhibit, Re-issue 3001," be produced on "Exhibits, Weitling Machine, Weitling Spindles, Weitling Rings, Weitling Board, Weitling Standards, and Weitling Bar," severally, or on any combination thereof?

A. No; not successfully.

Q. 8. Can an article of trimming like, or substantially like, that patented and described in "Exhibit, Re-issue 3001," be produced on the "Exhibit, Robjohn Machine," alone or in combination with any of the "Exhibits, Robjohn Guides," defendants' Exhibits S and T, and "Exhibits, Muller, 1, 2, 3, 4, and 5?"

A. No; not successfully.

170 Q. 9. Have you read and do you understand the testimony given in these suits by Edward S. Renwick and Robert Werner? and do you, after reading such testimony, still adhere to the opinions expressed by you on your prior examination herein?

A. I have read and understand the testimony given by Renwick and Werner referred to, and I do still adhere to my opinion given in my prior testimony.

Cross-examination by Mr Dorsey:

X. 10. In your answer to the second question, you say that "the spindles which are part of the Weitling exhibits, have fluting-rings which mesh into each other, geared together by said fluting-rings; the spindles being hollow for the reception of heating irons, and one of them provided with a crank, whereby they may be revolved in opposite directions, and for the purpose of drawing into and through and between the several rings and the configuration placed thereon;" would not the machine so arranged produce an article known as fluting?

A. Yes.

X. 11. If a plain zone a half an inch in width was left between two of those fluting-rings that have been spoken of, and which now appears to be on the Weitling machine, as at present adjusted, and the machine worked in the usual way, and a piece of suitable material run through it, would it not produce an article with a plain centre and two rows of flutes corresponding with the two rings on each side of the plain surface or centre?

A. It would produce an article with two rows of flutings separated by a regularly gathered or ruffled centre rather than a plain centre.

X. 12. Is not the reason why the centre would be gathered or ruffled instead of plain, be because the flutes in taking up the material in length furnished more fullness of material in the centre for the plain zones to act upon than would be the case if there were no fluting-rings on the spindles?

A. The fullness of the centre in its length would be due to the
171 fluting-meshes, and the taking up of the length would be equal to the shortening by the corrugations of the flutes.

X 13. In other words, I understand from your answer that the fullness in the centre, on which the plain zones act, is in proportion to the depth of the fluting-meshes on each side of the material?

A. The longitudinal fullness of the space between the fluting-meshes would be in proportion to the depth of the fluting-meshes.

X 14. That being the case, what is the difference between an article so constructed and an article of puffing, or an article with a puffed centre between two rows of flutes?

A. That puffing would be like a puffing my grandmother used on her cap in my earliest recollection, with regular rows of fluting in addition, provided that the material so made or formed, had been sized or starched, and introduced into the machine in a dampened state, and the rollers had been heated so as to dry and deliver the article with fixed flutes; but if the goods, without starching or sizing, were passed through fluting-rollers, a half an inch apart, then there would hardly be any gathering that could be said to be regular, left in the same.

X 15. You have so much of your grandmother in that last answer, that I do not see that part of the answer clearly that my question calls for. I will thank you, therefore, to let your grandmother rest in peace, and suppose that the fluting-rings were an inch or an inch and a half apart, and the plain zones correspondingly wide, then what would be the difference between an article produced and an article with a puffed centre, with rows of fluting on each side?

A. I don't see as the question is materially changed; the fluting-rings being an inch and a half apart, instead of a half an inch apart, would not constitute any difference in the operation of the fluting-rings on a given material; and I wish to state that I have in my mind the fact before alluded to, that the simple act of running a limp
172 material through between the meshes of two rings of cogs or flutes, could not of itself alone fix upon such material or strip of material any configuration sufficiently permanent to be called a fluted or puffed and fluted trimming. If it is desired to enquire whether such operation on proper material, sized or starched, and entered between such meshes or rings, sufficiently heated to fix the flutes by drying the same, whether there would then be produced a fluted puffing, or something else, then I would say all the conditions of mechanism, a starched and dampened material, and heated fluting-rings, sufficient to dry the material passing between the same being present, there would doubtless be a fixed fluting and gathered centre, which might properly be termed a fluted puffing; the puffing being of an old rather than a modern description, not being like the puffing in this case.

X 16. Have you in your possession now one of those caps you spoke of in your preceding answer, with puffing attached to it, as stated by you; and, if so, will you please bring it with you when you come on Monday to continue your testimony; or, if you have not got it, state how many years ago it was since you had one?

A. I have in my hand a puffing similar to what was on the cap referred to, and marked "Exhibit Pipo Puffing, October 21, 1872, R. E. S., Exam'r;" I never had the article referred to in my possession, but remember of its existence about 40 years ago.

X 17. Please state what would be the effect upon a piece of material run through the Weitling machine with all the conditions mentioned by you in your preceding answer, with an instrument in front, so con-

structed as to full the centre of the article in front of the plain zones before passing between the spindles; would it or would it not make the centre of the article thus run through more puffed than it would be without being so fulled?

Adjourned to March 2, 1874, at 10 a. m.

173 MONDAY, *March* 2, 1874.

Present, counsel as before.

Examination of S. P. KITTLE continued:

A. I think it would run through more puffed. I presume you mean an instrument like the arched guide, E, or some other instrument capable of taking in the breadth of the material, immediately in front of the space between the fluting-rings.

X 18. Please state what would be the effect upon a piece of material run through the Weitling machine with all the like conditions heretofore mentioned, as starching or sizing, without any mechanical instrument in front, but only with the hands of an operator, and would it not result in such an article of puffing as is marked "Exhibit Weitling Puffing No. 2," in evidence in this case?

A. I should think it would in something substantially the same, provided it was held so as to run over the finger or fingers, pressing up the centre portion of the same, to an arched form between the fluting-rings, and provided the hands were skillful and rested with great regularity and care so as to hold the raised portion immediately in front of the plain spaces between the fluting-rings.

X 19. Look at the centre of "Exhibit Weitling Puffing No. 2," and say whether or not it is irregularly waived.

A. It is.

X 20. Look at the indentations on each side of the centre in that same article of puffing, and say if they do not constitute two rows of fluting.

A. They do.

X 21. Look on the same article of puffing, and state whether or not the outer edges cannot be covered by an article of dress, such as a shirt-bosom, and so stitched as to make an article such as is marked "C" and appended to Weitling affidavit, on the last sheet of said affidavit marked "Defendants' Exhibit H."

174 A. I think it could; the same being covered by smooth binding or other material on the edges, outside of the regular rows of fluting.

X 22. Please state what you mean when you say in your answer to question 2 that the machine described in "Exhibit Weitling Application" produces simply an embossed or crinkled goods. Do you use the term embossed as crinkled goods indifferently, as meaning one and the same thing?

A. I meant to be understood as saying that it would produce a goods or trimming with a regularly-defined figured surface, corresponding to the matched figures of the embossing or crimping rings on the cylinders between which it was passed, in contradistinction to a figured surface that might be regarded as irregular and wavy in its surface, when produced by a differently constructed and organized machine or device; if I used the word crinkled it was inadvertently so used, as I meant crimped.

X 23. Do you mean to say that a piece of crimped goods and an em-

bossed article with the same indentations or figures or lines are the same in appearance and in result?

A. Not exactly that; and yet the two kinds of figures are alike, and these terms are applied to the wider differences. To emboss is to raise a figure from a plain surface of a defined character and so fix it. That may be accomplished by various means; for instance, by a die and pad, by two dies of reverse form so that the material being pressed between them will have imparted the fixed figure. These dies may be of any form, shape, or size on flat material, or may be cut or formed into rollers which operate together, or on the periphery of rings, as in the case of Weitling application, for the greater convenience in operating the same. The crimping and the fluting dies or faces strongly resemble the same, and the raised surfaces are very similar in many respects to the embossed surfaces. I think technically, however, the difference may perhaps be found more clearly in the elevation from a given line
175 or surface of a distinct figure as constituting embossing, whereas crimping or fluting would be found to exist on the two sides of a plane, rather than on one side only, which would be more characteristic of embossing; however, the difference is not regarded very closely in common parlance.

X 24. Then I understand you to say that you did not intend to use the expression an embossed or crinkled or crimped goods as indifferently or having the same meaning?

A. I do not mean to use the expression crinkled as having the same meaning as the words crimped or embossed.

X 25. What is the difference between crinkled and crimped goods?

A. Crimped goods have a given or defined form or figure; crinkled, irregular, and not defined or uniform in figure.

X 26. Look at "Exhibit Alexander Lyle," and say whether a cast or die of the configurations in that article could be taken so as to construct the necessary implements for embossing the configurations or design found thereon.

A. As I understand the question, I am requested to state whether or not a cast can be made of this exhibit so as to produce a die from such cast for embossing configurations on another piece of material substantially identical in configuration with this exhibit. My answer is, I don't see how that could be done.

X 27. Could not a skillful engraver reproduce on an embossing die the configuration, one row of the trimming, to wit, the flattened borders, the inlying regular rows of fluting, and the central zone of irregular crinkled or wavy surface, with such a degree of perfection as that the goods embossed thereby would be regarded as substantially the same in appearance and figure?

A. I think so.

X 28. Would the same be true in regard to "Exhibit King Puffing?"

A. Yes.

176 X 29. Suppose an instrument was placed in front of "Exhibit Weitling machine," with a depressed surface in front of the plain zones between the two fluting rings, so that the goods in being pressed down along the depressed surface in this shape would be contracted in width, or drawn in so as to full the centre of the goods before entering the fluting-rollers, would it produce a puffing by the machine or with the flutes on each side?

A. Provided the instrument located between the fluting rings of said machine had some device placed over the depression, or by some means the material were made to fall into the depression sufficiently to afford

greater breadth of material than the horizontal line would indicate, and provided, also, the said material were so guided that the outlying edges would overlap the fluting-meshes and be drawn in thereby, then I think it would.

X 30. Would such puffing be similar to that produced by an arched guide in front of said machine, and would the depressed implement be in the nature of an arched guide, or an equivalent for an arched guide?

A. So far as it goes, to wit, in front of the two fluting-rollers and the space between them and the depression opposite the space, and the device to act upon the material over the depression to carry it into the same, the device would be equivalent to the arched guide, and the puffing would be like that produced by the arched guide; that is to say, it would be the King arched guide turned upside down, less the part which would come opposite the plain bands.

X 31. Would turning the King arched guide upside down make any difference in the operation on an article of puffing?

A. I think not.

X 32. Look at the Weitling machine and the Weitling bar and say whether the Weitling bar when you gave your answer to the second interrogatory in your redirect examination was in the same position that it is in now.

A. I have looked at the exhibits referred to in the question, and
177 I think the bar has had its ends changed, to wit, the end that is farther*e*st from the machine, when I gave the answer referred to, was then near to the machine.

X. 33. Will you please mark with a cross the end that is nearest the machine now?

A. I have done so with ink.

X. 34. Now state whether or not one of the arched portions of the bar is not in front of the plain zones of the Weitling machine.

A. I find, by continuing the line of the centre of the space between the fluting-rings in said machine, on to the knob of the bar as now located, it will fall on either of the lines on the knob nearest the end marked with a cross, according to the position, longitudinally, of the bar, as located in the standards, and according to the position the standards may assume in their vibrations; but with the bar reversed, as when I gave the answer referred to, I find that the line of the centre of the space between the two rings of fluting meshes falls into the cavity of the corrugations at a line marked "K." The above answer is given while the machine is located on the "Exhibit Weitling Board" with the screw-holes in said board immediately under the screw-holes of the iron frame of "Exhibit Weitling Machine," as it must have been located, according to the testimony of the defense.

X. 35. Does not the Weitling bar have protuberances upon t o curved or arched section, and does it not constitute, together with the Weitling machine as now adjusted on the board, in reference to the bar, a combination of, first, an implement for causing the material passed over said bar to curve so as to occupy less breadth horizontally than it did before being operated upon by said implement; and, second, of an implement consisting of a pair of fluting-rollers substantially identical with the second member of the King combination?

A. The bar referred to in the question has protuberances or knobs turned thereon which may be said to be curved or arched; it does not constitute in connection with the Weitling machine on the board,
178 in reference to the bar as now adjusted, a combination of, first, an implement which would cause a material passed over it to

curve so as to occupy less breadth horizontally than it did before being operated upon by said implement, and it does not constitute a combination of an implement consisting of a pair of fluting-rollers, substantially identical with the second member of the King combination. That I may be understood, the "Exhibit Weitling Bar," though located in front of fluting-rollers, and though having knobs thereon, yet it has no definite or fixed location for said knobs, with reference to their crowning or depressed parts, with sufficient accuracy to be at all adapted for the purpose of leading and guiding a surplus of breadth of material between the rows of fluting on the machine; secondly, were such knobs or projections accurately located, and caused to lead at their crowning point or at the most depressed point between them in a line exactly in front of the central line of the space between the fluting-rollers, still it does not follow that such material would be depressed between such knobs or crowned on them so as to afford a surplus of material in breadth more than equal to the space between the fluting-rings. To accomplish that there would be additional means required, as the material of itself would not fall down into the corrugations to an practical result, nor yet does it seem to me that the location of "Exhibit Weitling Bar" is such as would indicate any such purpose, for it is only a little elevated above the line of the apex of the two rollers or fluting-rings, and considerably removed from that juxtaposition immediately over the point where an ordinary mechanic would seek to have it were it intended for a practical aid in producing the result referred to.

Adjourned to March 3d, 1874, at 11 a. m.

179 TUESDAY, *March 3d*, 1874.

Present, counsel as before.

Cross-examination of Samuel P. Kittle resumed:

(Continuation of answer to X. 35.)

That is to say, the Weitling bar is not an implement which, in its construction, I regard as a mechanical equivalent for the arched guide E, described in the "Exhibit, Re-issue 3000," for the reasons above given; neither does it form a member of the combination described in that patent, for any of the purposes therein contemplated.

(The latter part of the answer commencing with the words "that is to say" objected to as not responsive to the question.)

X. 36. Suppose that the arched guide E, as mentioned in the King patent, was arranged in combination with the Weitling machine, in place of the Weitling bar, would it then constitute a combination of, first, an implement causing the material passed over said bar to curve so as to occupy less breadth horizontally than it did before being operated upon by said implement; and, secondly, of an implement consisting of a pair of fluting-rollers substantially identical with the second member of the King combination?

A. Supposing the guide E, of the King patent, to be properly located over or before a pair of fluting-rollers, that part of the combination would be found in the guide E. As to the Weitling fluting-rollers being substantially the same as the fluting rollers described in the King patent, re-issue 3000, so as to be regarded as fulfilling the requirements of the second member of the combination, that may be questionable. If, however, the two flat rings outside of the fluting-rollers are constructed and arranged so as to compress the fluting sufficiently smooth and regular that the ordinary feeding mechanism of a sewing-machine
180 would feed the same, in the operation of putting in stitching in

said borders or plain bands, for the purpose of making the fluting permanent, then the second member of said combination would be substantially had or secured, to wit, a means or device for flattening or smoothing plain bands; with this deficiency, however, two additional rings of fluting-meshes, outside the plain band, which are not found in the Weitling machine. I refer you for a description of the same to the last paragraph of the first page of the written specification of the "Exhibit, Re-issue No. 3000," and also to the illustrations and claim.

X. 37. Can you not answer the last question yes or no?

A. Yes. I answer the question no; but I thought that the answer required an explanation, to make it more intelligible, in view of the character of the question.

X. 38. Suppose you adjust the guide E, as described in re-issue 3000, in the most favorable relation as a guide to the Weitling machine, instead of the bar, then would the combination exist of, first, an implement for causing the material passed over said guide to curve so as to occupy less breadth horizontally than it did before being operated upon by said implement; and, second, of an implement consisting of a pair of fluting-rollers substantially identical with the King combination?

A. The guide of the character described would be a combination of parts constituting an implement through which a material being drawn by the fluting-rings would present a surplus of material in breadth more than equal to the breadth of the space lying between the fluting-rings of the Weitling machine, and adapted in all respects to deliver the requisite amount of fabric for the configuration desired, or which would be produced by the organized Weitling machine. The guide would be in that view a guide organized of parts, and combined into an implement which would perform as indicated by the question. To the second part of the question I would answer, the guide would not be in combination with a pair of fluting-rollers substantially like the fluting-rollers described, specified, and illustrated in the King combination.

181 X. 39. Please state in what respect material properly prepared by starching or sizing, and run through the combination mentioned in the last question, with heated rollers, would differ from the material mentioned in letters-patent re-issue 3001; and if there is any difference, please state in detail in what that difference consists: first, as to the centre puffing; second, as to the flutes each side of the puffing, and so on as to the other features of the puffing of letters-patent re-issue 3001.

A. I think material run through that machine, under the circumstances indicated in the question, would be formed or made into a trimming substantially like that described and illustrated in the "Exhibit, Re-issue 3001," before the same was stiched or bound in the plain bands. There may be some question as to the flattening or smoothing effect of the plain rings outside of the fluting-rings. I mean one row of puffing, instead of three rows as illustrated in the exhibit.

X. 40. Suppose the "Exhibit Weitling Bar" was constructed with protuberances or arched portions or depressions between the protuberances or arched portions immediately in front of the flattened zones of diameter or base, to correspond with the space between the fluting-rings, what kind of fluted puffing would then be produced upon a piece of material, the material and the rollers being in the best condition? Would it be like the article described in your last answer? And, if not, state any difference that would exist.

A. If the material, as supposed, was of a breadth equal to the outside plain ring, the rings of fluting-meshes and the centre a plain band or

zone, and some means were used to give the conformity of the raised or depressed bar in front of the plain zone, and to lead the other parts outside the plain zone regularly into the machine so as to afford the requisite amount of material to all the operating parts, then I think the trimming produced would be like the trimming described in my last answer and in Exhibit re-issue 3001, provided the plain bands outside of the fluting-meshes were sufficiently pressed or smoothed
182 so as the ordinary feeding mechanism of a sewing-machine could operate for putting in stitching.

X 41. Your attention is particularly called to the last part of the last question.'

A. I had reference to that in the last part of my answer. I am not clear as to the practical operation of the outside rings of the Weitling machine.

X 42. Look at the Weitling machine, the "Exhibit Weitling Boards, Weitling Standards, and the Weitling Bar," adjusted in working order, and say whether you do not observe in these standards, about three inches below the bar, two round holes?

A. Yes, I do.

X 43. Now, suppose that the arched portions of the bar, or the depressions between the arched portions, were adjusted immediately in front of the plain zones of the rollers, and there was a plain bar placed in those two holes about three inches below the arched bar, on which was wound material of sufficient length and width and properly prepared with starch and sizing for making puffing, and that lower bar was made to offer sufficient resistance to the unwinding of said material so as to cause the material when passed over the upper or arched bar and in between the rollers of the machine to hold the material down close upon both the arched and the depressed surfaces, so that the material in passing in between the rollers would pass in shaped in conformity with said arched bar, what would then be the configuration of the puffing produced? Would it differ from the puffing you described in your last answer? And, if so, please state in detail in what respect and wherein it would differ, beginning in your comparison with the puffed centre, going on to the rows of fluting each side of the centre row of puffing, and so on; and also state whether any difference would be produced (if the arched portions and the depressed portions were higher and lower, respectively, on the conformation) in the puffing in its centre.

A. In the hypothetical case recited in the question, I confess it
183 would be somewhat difficult to describe, with any degree of accuracy, just what the configuration of the product would be. I would like to see the machine so organized and operated, to enable me to give satisfactory answer.

If the "Exhibit Weitling Puffing" is the result of such organization, or the "Exhibit Weitling Ribbons" are the result of such organization, then I would say that it would produce a trimming with configuration very different from that described in my last answer.

Then, again, I would like to know just how the material was secured on the bar, just what kind of material it was, just what amount of tension or resistance was given on any given material, just how accurately it was led into and between the rollers, whether the same was nipped by the plain bands or by the fluting-meshes, &c., &c., before I could be enabled to approximate a satisfactory answer.

X 44. Do you know that it would be physically impossible, with the machine adjusted as stated, as in the last question, and as in the preceding question, with the arched portions of the bar, or the depress-

ions adjusted immediately in front of the plain zones of the rollers, with the plain bar placed in the two holes, about three inches below the arched guide, on which suitable material, suitably prepared for making puffing, and that that lower bar was made to offer sufficient resistance to the unwinding of said material so as to cause the material when passed over the upper or arched bar, and in between the rollers of the machine, to hold the material down close upon the arched and depressed surfaces, so that the material when passing in between would pass in shaped in conformity with said arched bar and said depressed surfaces, to make such a result as the "Exhibits Weitling Ribbons?"

A. Not all, if you had those embossing rings in, but with the plain zones I don't think you could. With the plain zones, the result might be similar to "Exhibit Weitling Puffing No. 2, R. E. S., Exam'r."

X 45. I will ask you if you understood the questions 42 and 43, just answered by you, and if your answer expresses your honest opinion?

184 A. I think I understood the questions. It would not be at all strange, however, if I did not fully, for they were very lengthy, and I had to have them read two or three times before I could comprehend all the doubtful suppositions put into them, and when I did, I confess I was at a loss in being able to arrive at any definite, positive conclusion.

I mean to express my honest convictions always, if I express any. I will be obliged to you in the future, therefore, to make your questions something less than a page long, and direct, and as comprehensive as possible, that you may not have occasion to doubt the honesty of my answers.

X 46. I will ask the examiner to read over to the witness the preceding several questions referred to, and ask him to state what portions that he does not understand.

Adjourned to 4th inst. at 11 a. m.

MARCH 4TH, 1874.

Present, counsel as before.

Examination of S. P. Kittle continued:

A. The examiner having read several questions to me, I will state, as I cannot understand the character of the second bar, the manner of securing it or operating it, as I before intimated. I cannot understand the operation of the plain bands outside of the fluting-rings. I do not understand whether the periphery of the fluting-rings are materially above the periphery of the plain bands. I do not understand in regard to the character of the fabric operated upon, whether it is very sleazy or thin, or more firm. I do not understand whether it is to be introduced from beneath or above, and in my previous answer I have tried to approxi-

185 mate, in view of the suppositious character of the questions, answers that would comprehend the general scope of the questions, and the state of facts, and the illustrations of the machines, taking in view the whole construction and operation as described in connection with the hypothetical machine in the questions.

(Counsel for defendants moves to strike out all that part of the answer commencing with the words "In my previous answers I have tried to approximate," &c., down to the close of the answer.)

X 47. Do you mean to say in your last answer that you do not understand the construction of the Weitling machine adjusted in combination with the Weitling bar and the standards, board, and what you call the second bar?

A. Yes. I don't know anything about the second bar; whether it is a flat bar or many-sided bar with rounded bearings, or whether it is a round bar like the exhibit bar.

X 48. You say in your answer to X 43, "If the 'Exhibit Weitling Puffing' is the result of such organization, or the 'Exhibit Weitling Ribbons' are the result of such organization, then I would say it would produce a trimming with configurations very different from that described in my last answer." Now do you not know that the result of such a combination or organization as that mentioned in said question would not and could not be produced such as the Weitling ribbons?

A. Not necessarily, in view of the many rings as represented as being used in connection with these rollers. If only the rings, and just the rings, were used or intended to be used as on the "Exhibit Weitling Machine," now presented to me, then the "Exhibits Weitling Ribbons and Weitling Puffing" would not be produced, but puffing somewhat similar to Weitling puffing No. 2 would doubtless be the result; all of which I think I have clearly stated before.

187 X 49. In your last answer you state, "If only the rings were used or intended to be used as on the 'Exhibit Weitling Machine' now presented to me, then the 'Exhibits Weitling Ribbons and Weitling Puffing' would not be produced, but a puffing somewhat similar to Weitling puffing No. 2 would doubtless be the result." Now state whether or not the rings, and just the rings as they are now presented to you, as used on the "Exhibit Weitling Machine," were not the only rings on the Weitling machine when it was presented to you in the X 43.

A. The machine "Exhibit, Weitling Machine" was presented to me first some two years since, and I made some trimming on it then and have heard considerable about it since, and in this case have had occasion to read a good deal more about it and examine descriptions of its construction and operation, and what it has been capable of producing at divers times in the hands of skillful or less skillful manipulators, so that I confess that my mind has been a little bewildered in trying to find out what the plagued thing might or might not do under given circumstances and under modified changes, so that in giving the answer referred to I may have wandered in my thought, more or less, from what the counsel desired absolutely to have answered. They were the same rings.

X. 50. In your answer to X 48 you used the expression, "But a puffing somewhat similar to Weitling puffing No. 2 would doubtless be the result." So far, so good; now please state in what respects the puffing would be somewhat similar to Weitling puffing No. 2 and in what respects it would differ, in your opinion, and state your reasons for that difference.

A. I think Weitling puffing No. 2 would represent my view of the result of the operation or work of that combination as accurately as any words I could give at this time would, and yet I am not prepared to say that that would be a correct showing of the product of the machine, as supposed. As this examination, apparently, may last several days, I will ask the privilege of making experiments with "Exhibit, Weit-

188 ling Machine, Exhibit, Weitling Bar, Exhibits, Weitling Board, Standards, and another Bar," that I may see what can be done or what cannot be done, and give thereby answers that will satisfy the counsel, if my previous answers do not.

X. 51. Please state whether in your opinion the "Exhibit, Weitling Bar," when placed in the most favorable position in front of the plain

zone, on the "Exhibit, Weitling Machine," over which suitable material suitably prepared for making fluted puffing, over which said material would be passed, so as to give it the conformation of said bar, in front of the plain zones, whether the material was fed to the rollers of said Weitling machine over said bar by hand or by being wound around another bar placed in the two holes, as seen in the lower part of the Weitling standards, so as give to the material the configuration of the Weitling bar, whether said Weitling bar would not be in the nature of a guide to the said Weitling machine.

A. No; not necessarily.

X. 52. Would the bar placed in the lower holes on Weitling standard, for the purpose of having the material to be made into fluted puffing wound round it, and the material being suitably prepared to be puffed and then passed from the lower bar over the upper bar and into the Weitling rollers or spindles, to be drawn in by the operation of the rollers or spindles, and detained on the lower bar with sufficient resistance to require the action of the fluted rings to draw the said material through the Weitling rollers or spindles, have a tendency to add any fullness to the centre or puffed portion of the material acted upon by the machine; that is to say, suppose the Weitling puffing No. 2 had been made with the two rollers adjusted as above mentioned, to wit, the Weitling bar and the lower roller, would the puffing in the centre of said Weitling exhibit be the same in its fullness, or less full, or more so?

(Objected to as supposing a state of facts with reference to the arrangement and construction of the "Exhibit, Weitling Machine,"
189 and attachments thereto, concerning which facts no testimony has been offered in these suits.)

A. I suppose I am asked now to state whether material, under the best conditions for making puffed trimmings, were wound regularly around a roller, which being located in the lower back holes of the standard, and so passed over one of the knobs of the "Exhibit, Weitling Bar," and drawn by its two edges through the fluting-meshes, whether that would increase the breadth of material between said fluting-meshes in the cross-lines sufficiently to afford a crinkled surface like that of "Exhibit, Weitling Puffing No. 2;" if that is the scope of the question, I answer yes, provided the knob and the material wound and detained is in the right location, in line, in front of the space between the fluting-rings of the rollers.

X. 53. In the absence of the lower bar, in the lower holes of the standards, supposing all the favorable conditions of the article to be made into fluted puffings, but fed over the upper bar into the rollers or spindles with the hand so as to press the material upon the knob or protuberances in front of the plain zones, would the result, as puffing, produce a similar article to Weitling puffing No. 2, with only an apparently fuller breadth of material in the puffed centre?

A. The substitution of the hand for the lower roller might or might not increase the fullness and regularity of the centre. That would depend entirely upon the tension over the knob, I think.

X. 54. Referring to your last answer, suppose that the tension you there speak of was sufficient to give the material to be puffed the full advantage you evidently contemplate in your last answer, then would not, as you state in your last answer, the fullness and regularity of the centre be increased?

A. If the tension and direction given by the supposed roller and the supposed position of the hand were entirely alike, I don't see why there should be any difference in regard to the puff in the result.

190 X. 55. If, as you have said, the fullness of material in the puffed centre depends upon the tension of the material upon the arched portion of the Weitling bar, then if that tension is greater or less, whether it is produced by the hand or not, would not the fulness of the puffed centre be greater, if the tension spoken of was greater or less, if the tension was less?

A. It would, provided in all cases it was equally distributed over any given part of the bar; that is to say, if there was no tension, there will be no perceptible taking up of breadth; if there was a sufficient tension over any knob, or any cavity between knobs and the same, properly distributed on the proper material, that material would be conformed in its cross-section largely, if not wholly, to the surface of the bar over which it was strained.

X. 56. Suppose the Weitling bar was removed from the machine, and the material was fed into the rollers of the machine with the hand, could it produce "Exhibit, Weitling Puffing No. 2"?

A. I think it could.

X. 57. What would be called the office or function of supplying material to the rollers in a manner to produce Weitling puffing No. 2?

A. I should call it guiding the material.

X. 58. What would constitute the guide in that case?

A. The human hands.

X. 59. Would the hands, in that case, be an equivalent for the complainant's guide, mentioned in re-issue 3000?

A. Not in that case; in a case where they were used in connection with a machine that would perform the offices described as being performed, and in the manner of performing the same, as described in "Exhibit, Re-issue 3000 and 3001," they would be an equivalent so far as the human hands can be regarded as an equivalent for a mechanical device, and so far as they can perform the work of a mechanical device in the manner therein described.

191 X. 60. Do you consider that it is necessary that in order to constitute an equivalent for the complainant's guide, as mentioned in re-issue 3000, that it would be necessary that such an equivalent should be used in connection with a machine that would perform the offices described as being performed, the same as described in "Exhibits, Re-issues 3000 and 3001"?

A. In determining an equivalent in mechanics I have been in the habit of ascertaining the object, the construction, and the operation of the device in connection with other parts with which it is combined for a given result; therefore I should say, in order to make a modified device perform the offices of any given device, in the sense of a mechanical equivalent, it would be necessary to combine it or use it in substantially the same manner for the same purpose. I do not mean to say an equivalent device for any given one may not be used for various purposes, but in supposing an equivalent in any given case, then the rule that I have cited above would be correct for ascertaining what is the equivalent.

X. 61. What I want your opinion upon is whether a device like the complainant's guide in re-issue 3000 would not be an equivalent for the same, unless, as you state in your answer 59, it was used in connection with a machine that would perform the offices described as being performed, and in the manner of performing the same as described in re-issues 3000 and 3001.

A. It would be an equivalent on an identity as a construction, and

not be used for any purpose; perhaps it would hardly be considered an equivalent, but rather the thing itself, as a device or thing separately considered.

X 62. What I want your opinion upon, is whether or not an implement or the human hand, when used as a guide, for the purpose of feeding and guiding the material into fluting-rollers of any kind, where the office and purpose was clearly to guide and feed the material to the fluting-rollers, as the hopper is supposed to guide the grain into the mill to be ground, whether that would be an equivalent for the guide mentioned in "Exhibit, Re-issue 3000?"

192 A. I understand you now to ask me, first, whether a mechanical construction, for the same purpose, made in substantially the same manner, and producing the same result in connection with other parts of mechanism, would be a mechanical equivalent? I answer, yea. Secondly, whether the human hands performing the office of some mechanical contrivance, and operating with some other part of a construction, to produce the same result, would be an equivalent for the device for which the hands was substituted? It certainly would not be a mechanical equivalent, as regards construction; it might be regarded as an equivalent in the performance of any office in connection with mechanism, so long as it performed the entire office of the device for which it was substituted. This rule will apply equally to "Exhibit, Re-issue 3000," or any other case.

X 63. I did not ask you, as you state in your last answer, whether a mechanical construction for the same purpose, made in substantially the same manner, and producing the same result, &c., as you go on to state in your answer, but whether or not an implement, or the human hand, when used as a guide for the purpose of feeding and guiding material into fluting-rollers of any kind, where the office and purpose was clearly to guide and feed the material to the fluting-rollers, was, in your opinion, an equivalent for the guide mentioned in "Exhibit, Re-issue 3000;" or, in other words, whether all guides, of all descriptions or shapes, are equivalents of the complainant's guide in "Exhibit, Re-issue 3000;" and whether, in your opinion, letters-patent re-issues 3000 and 3001 embrace all guides that are used or that have been used, in combination with fluting-rollers, or rollers for a similar purpose or of a similar construction?

A. No; to all branches of the question.

X 64. Then I understand you to say that there may be implements known as guides, used in connection with the fluting-rollers, for the purpose of guiding the material into such rollers, that are not equivalents for complainant's guide E, in re-issue 3000?

A. Why, yes; I have been testifying about several in this case which were not equivalents.

193 X. Then I understand you to say that the guide E, mentioned in letters-patent re-issue 3000, is a specific guide, in shape and construction, and that the letters-patent confine the complainant's rights to said guide, or similar guide of the same shape and pattern?

A. I don't know what you mean by "same shape and pattern." I understand the complainant's guide to be an implement or device capable of, first, giving direction to a piece of goods in its course of introduction to and into a pair of fluting-rollers of specified configuration, to wit, a central plain zone of comparatively large breadth, bounded by two rows or rings of fluting-meshes, outside of which there are two plain bands, on to which pressers or smoothers bear in the lower roller, for the purpose of levelling or smoothing the trimming as it is formed in

the roller and guide, outside of which plain bands there are other rows or rings of fluting-meshes, and that the device arched guide, mentioned in the question, is so constructed, located, and arranged in conjunction with said fluting-rollers as that by its construction and operation the material to be formed into a fluted puffing is not only guided in its general direction into the fluting-rollers, but that there is in said implement an arched or raised portion in said guide, which is located immediately in front of the plain bands, in the rollers before spoken of, and also there is a means, to wit, a cap or top part, acting together with the raised or arched part, in such a manner as to secure the certain delivery of the requisite amount of material, opposite each longitudinal section of the rollers, and each distinct configuration on the said rollers particularly, so taking up the breadth of material to be formed into a puffing in front of the plain zone as to afford a greater breadth of material than would equal the space between the two inside fluting-rollers and opposite the plain zone, so as to afford in its cross-line a crinkled or irregularly waived surface, after the same has been passed through the fluting and other mechanism, and the same being capable of duplication for the production of two or more rows at one operation.

194 Adjourned to Thursday, March 5, 1874, at 11 o'clock a. m.

NEW YORK, *March* 5, 1874, 11 a. m.

Present, counsel as before, and the witness, Samuel P. Kittle, for further cross-examination.

(Continuation of answer to X. Q. 65.)

The instrument or device, guide E, of complainant's "Exhibit, Reissue 3000," is a mechanical contrivance for controlling and guiding material, to be formed into fluted puffing, to and into rollers of the proper configuration for that purpose, and is provided with an arched or other portion, adapted to taking in and delivering a surplus of breadth of said material, opposite to a plain zone, or plain zones, so that the material, after having passed said plain zone or zones, will, in consequence of the condition of its delivery from the guide, be more or less crinkled or irregularly waived under the operation of the plain zones, while the other parts of the trimming, to wit, the regular rows of fluting and the plain bands lying outside of the same, will have just the amount of goods substantially requisite for their formation delivered to them from the guide; that is to say, the guide must be provided with one or more arched portions, or their equivalents, for the purpose above stated.

X 66. Suppose Weitling bar had adjusted on the top of the curved surface a piece of metal corresponding in configuration with the shape of the Weitling bar, with an aperture sufficiently wide only to receive and pass through material suitable for fluted puffing for shirt bosoms and other articles of dress, the material in the most suitable condition for making fluted puffing, and that bar, so arranged, was used in combination with the Weitling rollers, in the most favorable
195 manner, to make fluted puffing corresponding with the puffing described in complainant's letters-patent re-issue 3001, would it then be an equivalent to complainant's arched guide, as mentioned in complainant's letters-patent re-issue 3000?

(Objected to by complainant's counsel, on the ground that the question inquires concerning a construction and arrangement of mechanism not shown by any testimony in these suits to have ever existed.)

(Defendant's counsel puts these questions to the witness, as an expert, for the purpose of fairly drawing out the witness' understanding of the

scope and character of complainant's patent, so as to give the court to understand whether, in his view, said guide had not been anticipated, on one hand, in principle, and, on the other hand, to ascertain if, in the opinion of the witness, defendants have infringed complainant's invention.)

A. In view of the question not taking in breadth enough of guide to afford only material for two rows of flutes, and the irregularly-crinkled zone or space between the same, which, as a result, would be only fluting and puffing without the plain bands, I would say nay; but if it is intended to add breadth and conformity of guide, sufficient to pass material in breadth equal to plain bands on either side, in addition, then I would say yes; though most remotely I think in the last case, the curved outside sections of the guide might deliver the goods in a manner not practical. My answer takes in also the supposition that the question means to cover a guide and construction capable of duplications.

X 67. I would like the witness to state whether, taking the Weitling machine as it is now adjusted, as a fluting-machine, and then the Weitling bar, adjusted in all respects as in the last question,
196 would the Weitling bar be an equivalent to the arched guide in complainant's re-issue 3000, without the supposition that the question means to cover a construction capable of duplications?

A. Yes; with the conditions before suggested in my answer.

X. 68. With the piece of metal removed from the top of the bar, the bar being adjusted to the Weitling machine, in all respects as in the two last questions and answers, would it then be an equivalent for the guide E, mentioned in the complainant's re-issue 3000?

A. No. I think that there must be some means or construction that will insure, not only the guiding of the proper breadth generally for the puffed centre of material, in excess of breadth to the space between the fluting-rollers, as well as material for the fluting-rollers and the plain bands, but the guide must have the capacity in its construction to insure the delivery of that excess of material into the rollers opposite the plain zones.

X. 69. Then I understand you to say that it is the piece of metal on the top of the Weitling bar that alone makes the difference, and determines whether in the case, as stated in the last several questions and answers, the Weitling bar would be an equivalent to the complainant's guide E, in letters-patent re-issue 3000?

A. I didn't say that, nor did I mean to be understood as saying that. I refer you particularly to the last part of my preceding answer taken in connection with my preceding answers; that is to say, if that piece of metal, or some other thing, taken with the bar, would accomplish what I have described, in the manner described in my preceding answers, then it would be a mechanical equivalent for the guide E, in the patent re-issue 3000.

X. 70. Can you or not say, that if the Weitling bar was so adjusted with the piece of metal on its top, as described, in connection with suitable fluting-rollers, whether it would or not produce the same
197 result, simply as to shape or configuration of material, as that mentioned in re-issue letters-patent 3001; would it be an equivalent to the guide E mentioned in re-issue 3000?

A. I have no doubt but what the "Exhibit Weitling bar" could be secured in position and mounted with a piece of metal, in such a manner as to guide the requisite amount of material to the fluting-rollers referred, so as to be a mechanical equivalent for the guide described in the exhibit referred to, ("Exhibit, Re-issue 3000.")

X. 71. Now please state whether in that case the only result accomplished by the piece of metal on the top would be to hold the material down to the surface of the bar, and give it the shape of the bar, before it entered the fluting-rollers.

A. Oh, no; I have said that the arched portion of the bar must be in correct position, in which case all it would do would be as an arched portion, to afford the increased breadth of material between the fluting-rings, and that it would not do unless the metal or other substance should secure the increased breadth, by conforming or curving the material to be puffed over that arched portion. I have supposed in all my answers, or intended to, all the rest of the offices or purposes of the arched guide E be added in a greater or less degree of perfection by the addition of the part or piece of metal.

(Counsel for defendants moves to strike out all the last part of the answer, commencing "I have supposed, &c.," as not responsive.)

X. 72. State whether, in your opinion, complainant's arched guide E, as mentioned in his letters-patent reissue 3000, without the top part of said guide, was used in combination with "Exhibit, Weitling Machine," understanding Weitling machine to be characterized, as to its rollers, by broad plain central bands, bounded by regular fluting-rings on either side, and plain bands outside of the fluting-rings; the fluting-rings on each spindle meshing into like fluting-rings on the opposite spindle,
198 such as it apparently was when "Exhibit, Weitling Puffing No. 2" was made; would it be, so used, an equivalent for complainant's guide E, as described in letters-patent re-issue 3000?

A. No, sir.

X. 73. If the guide, as above constructed was used in combination with suitable fluting-rollers, substantially as set forth in complainant's patent 62492, would said guide then be an equivalent for the guide E, as mentioned in complainant's letters-patent re-issue 3000?

A. No.

X. 74. If the guide, as above constructed, was constructed in combination with the machine as described in complainant's patent 59036, for an improvement in puffing for shirt-bosoms, marked "Exhibit 59036," would it then be an equivalent for the arched guide E, mentioned in "Exhibit, Re-issue 3000?"

A. No.

X. 75. If the guide, as above constructed, was constructed in combination with the machine marked "Exhibit, Robjohn machine," would it then be an equivalent for the arched guide E, mentioned in "Exhibit, Re-issue 3000?"

A. No.

X. 76. If complainant's arched guide E, as mentioned in letters-patent "Exhibit, Re-issue 3000," was used in combination with the Robjohn machine, would it constitute the combination patented in re-issue 3000?

A. No.

X. 77. If complainant's arched guide E, as mentioned in letters-patent "Exhibit, Re-issue 3000," was used in combination with the machine described in letters-patent (and file wrapper) "Exhibit 59036," would it then constitute the combination patented in re-issue 3000?

A. I think not.

X. 78. Would not the lower plate of the guide E, with its arched portions, as the lower plate is constructed in the guide E, placed in front of suitable fluting-rollers, for the purpose of making fluted puffing, be a guide, or in the nature of a guide, even though it was

without the top plate of the arched guide, as mentioned in complainant's letters-patent re-issue 3000?

A. It could hardly be said to be a guide, though it would contain characteristics of part of a guide. It would be like one-half of a pair of shears or pincers, &c., inoperative without the other part, or some equivalent device for it.

X. 79. Suppose an implement, constructed as in the above question, was used in combination with the machine mentioned in complainant's letters-patent "Exhibit No. 62492," instead of the specific guide mentioned in said letters-patent, would it not then be a guide, or in the nature of a guide, in combination with that machine?

A. It could not be said to be a guide, because it would not in itself perform the office of a guide. It might be said to be in the nature of a guide, because it is a part of an instrument that is a guide, and as far as it goes performs the office of that guide. It might act in conjunction with some other construction or application, different from the upper part of the guide referred to, more fully as a guide.

(Latter part of the answer commencing at "It might act, &c.," objected to, as not responsive.)

X. 80. Suppose a machine was constructed for making fluted puffing, with the machine patented in "Exhibit 62492," and the lower plate of the guide, as mentioned in re-issue 3000, only used as a guide, without the upper plate, would you consider it an infringement of letters-patent re-issue 3000?

A. I don't think I should; still I would like to see the operation and manipulation of goods over such a construction before being too positive, for the reason I am not absolutely certain but what an operator of great skill might succeed, having all the rest of the mechanism described in said patent, in producing a fluted puffing to a degree
200 that might be regarded as a practical result in the manufacture of fluted puffing, though I very much question it.

X. 81. Would you regard the use of the machine patented in letters-patent No. 62492, without the guide E, if it could make, in the language of your last answer, a fluted puffing, when used by an operator of great skill, especially if that fluted puffing was similar in all respects to the puffing patented in complainant's re-issue 3001, an infringement of complainant's patent re-issue 3000?

A. No.

X. 82. Would you regard the use of the guide E, as mentioned in the re-issue patent 3000, in combination with the Robjohn machine, for the purpose of making fluted puffing, as the combination patented by the letters-patent re-issue 3000, or as an infringement of those letters-patent?

A. I don't understand that the Robjohn machine has any provision in it for making puffing; only fluting, with certain very narrow breaks; and I don't see how the guide referred to in the question could in any way be considered as adapted to those fluting-rollers in the Robjohn machine; therefore my answer will be no.

X. 83. Then I understand you as answering the last question in the negative; is that so?

A. Yes; unless the rollers of the Robjohn machine are formed differently from what they appear to me, and made to correspond with and be adapted to the purposes of the guide referred to in the question.

X. 84. From your knowledge of mechanism and your knowledge of the Robjohn machine, can't you answer that question yes or no? I only want an answer unambiguous, if I can get it.

A. I don't see how I can make my views in regard to the matter in

quired of in the two last questions any plainer. I don't think the Robjohn machine as it appears, with any guide, would make a fluted puffing as described in "Exhibits, Re-issues 3000 and 3001."

X. 85. Suppose the guide E, as mentioned in letters-patent "Exhibit, Re-issue, 3000," was used in combination with the Weitling
201 machine as it is now constructed, would you regard that combination as substantially the same as the combination patented in reissue, Exhibit 3000?

Adjourned to March 6th, 1874, at 11 a. m.

NEW YORK, *March 6*, 1874—11 a. m.

Present: Counsel as before, and the witness, Kittle, for further cross-examination.

A. In the Weitling machine, as organized with plain bands and fluting-rollers, there are no pressers on the outside plain bands, as described and shown on the "Exhibit, Re-issue 3000," in which exhibit the pressers are described as performing the office of flattening the rows of fluting and completing the puffing, as it is formed by the fluting-rings and plain zones on the rollers, and which fluting-rings are located outside of the zone or zones. These pressers in Exhibit 3000 are so constructed as to guide the goods, as the same is fluted and puffed, down on to one of the rollers, and compress and smooth the same into a compact, finished, level surface on the plain bands of one of the rollers; that is their office and purpose, so that the fluted puffing being delivered from said rollers through the operation of the pressers on the plain bands, it is in a finished condition, without resort to laundrying, and capable of being fed through the ordinary feeding mechanism of a sewing machine, and receiving stitching in said plain bands that will render the configuration, to wit, the fluted puffing, permanent. Now I question whether the plain bands in the Weitling machine, located outside the fluting-meshes and opposite the plain zone which lies within the fluting-meshes, are so constructed for and capable of such operation as will produce the result to any practical extent which the organized machine, the fluting-rollers,
which may be said to constitute the second part of the combina-
202 tion of "Exhibit, Re-issue 3000," comprehends and performs. Doubtless said plain bands in the Weitling machine would, to some extent, flatten or deface the fluting or regular gathering of the fabric as the same passes through the machine; and as I consider that the scope of the description and the claim of "Exhibit, Re-issue 3000" fairly embraces a construction that affords the devices described therein, to wit, the plain bands and the parts operating therewith, for the purpose of producing a specified article of trimming, as part of the roller construction, or fluting and puffing mechanism, included in the words of the claim "in combination with suitable fluting-rollers, substantially as herein set forth, for the purposes specified;" and furthermore, the "Exhibit, Re-issue 3000" describes and illustrates fluting-rings outside of the plain bands referred to at the ends of the rollers, and the guide is constructed so as to deliver the goods to be formed into fluted puffing into those fluting-meshes. The Weitling machine is also deficient in this provision. I should therefore say, when the guide E, of "Exhibit 3000," located in the best possible position, in relation to the organized Weitling fluting-meshes, and the rings on the spindles, it would not embrace and combine the construction described and claimed in re-issue 3000.

X. 86. Are you satisfied that you have specified all the points of the difference between the "Exhibit, Weitling Machine," as adjusted, as escribed in the last question, in connection with complainant's guide,

E, as a combination, and the combination patented in "Exhibit, Re-issue 3000"? If not, take time to scrutinize carefully the two combinations, and mention any other difference, if any, that you may discover.

A. I think the differences which I have mentioned in my last answer are sufficient to enable me to answer the questions as I have; but as regards any other differences, the only thing that now strikes me, as being likely to be substantial, is the apparent difficulty of working the peripheries of the opposite side-rings of said "Exhibit, Weitling
203 Machine" sufficiently close to each other to produce a substantially analogous result to that which is produced by the pressers described in "Exhibit, Re-issue 3000," and at the same time to produce well-defined and deep rows of fluting.

X. 87. Would it make any difference, in your opinion, if the plain zones spoken of in the Weitling machine were a little wider, and more or less hollowed out or curved up next to the fluting-meshes?

A. I don't think that would be a substantial difference. The machine would, probably, perform better in producing the puffed portion.

X. 88. Would it make any difference, in your opinion, if what you allege is a part of the invention of complainant, as described in letters-patent, re-issue 3000, had no pressers on the plain bands; and, secondly, if the Weitling had pressers on the plain bands adjusted in a similar manner as the pressers are arranged on the complainant's machine, as patented in letters-patent, re-issue 3000?

A. Certainly it would. I quote from the letters-patent "Exhibit, Re-issue 3000:" "This invention is designed for making puffing applicable to shirt-bosoms, trimming, or other purposes of dress, in which the article, as it issues from the machine, is (without having resort to laundrying) delivered in a complete form, either singly or in two or more series of rows, composed of flattened borders, with flutes running along their inner edges, and a puffed or crinkled surfaces between the flutes." After describing fully the construction of the machine to perform the above offices or work, the claim ends with the words: "Substantially as herein set forth, for the purposes herein specified." A machine could not be substantially the same without a means of producing the flattened borders, and would not be the machine described and claimed in "Exhibit, Re-issue 3000," in my opinion. If the Weitling machine had the pressers, or their equivalent, in combination with the guide E, as suggested, it would still be deficient in the end fluting-rings described and illustrated in re-issue 3000, and which act to prevent a draw-
204 ing in at the edge of the material being formed into the trimming described, off into *an* oblique and irregular gathers. I mean that part of the trimming described as plain bands into which stitching is to be inserted for the purpose of retaining it in shape.

X. 89. Please look at the complainant's letters-patent re-issue 3000, commencing at the words "What I claim as new," and ending with the words "for the purpose specified," and state what it expresses. Just state the language it contains.

A. The counsel stating he requires the quotation as my answer, I quote the two last paragraphs of the patents "Exhibit, Re-issue 3000:" "What I claim as new, and desire to secure by letters-patent, is the guide E, constructed with one or more curved or arched portions A 1, in combination with suitable fluting rollers, substantially as herein set forth for the purposes specified."

X. 90. Do you find in the language there used anything said about pressers; the language as there used?

A. The last nine words are comprehensive words, and take in some

thing more than has been expressed in the quotation. Indeed, to my mind they lead to a consideration of the whole written specifications and illustration in all its relations and parts as bearing on the invention, to wit, a new way of doing a thing; which carries me back to inquire what the thing is that has been done in a new way, and what combination of mechanical parts or elements have contributed to the doing of the new thing, and the definite devices and their relations to each other that contribute to make up the new combination of mechanism, and how each stands related to the other, and becomes a necessity in the organized machine for producing the result or doing the work contemplated or declared that the invention is made for.

(That part of the answer, commencing at the words "indeed, to my mind," and to the close of the answer, objected to as irresponsive.)

205 X. 91. Do you consider the combination recited in the King claim, in letters-patent re-issue 3000, to include every combination of, first, an implement for operating on the material in such manner that it is curved transversely, and made to occupy less breadth, horizontally, before passing through the fluting-rollers; and, secondly, a pair of fluting-rollers substantially identical with the fluting-rollers mentioned in said re-issue letters patent 3000, in such a manner that the same ultimate result, as respects the material, is accomplished as is the case with the said combination mentioned in letters-patent re-issue 3000?

A. Yes, about that, I guess. The invention consists in putting together in proper relations mechanical elements or devices, the operation of which is to produce a given result. The specific manner of producing any part of that result might or might not be essential; as, for instance, in the arched guide, the part characterizing the guide as an arched guide might be more or less arched; the arch might be turned the under side up, or the line of taking up the goods might be bent in its horizontal line by some means, or the goods might be carried through the top and bottom part over a simple edge or strip; indeed there might be various ways to modify the construction, and yet the identical or substantially the identical thing be done, and done in substantially the same manner and by substantially the same means, though not identical; so we might go through each particular element of the machine and part of the operation. The invention described in "Exhibit Re-issue 3000" is for a machine characterized by an instrument which, while it gives general control and direction to goods passing into fluting-rollers of a specified character and of specified construction, takes in the breadth of such goods opposite a space designated as a plain zone, so that the transverse line of the goods delivered to and into the fluting-rollers is greater than the space between the bands or rows of fluting bounding that space. That I regard as an absolute condition of

206 the combination. The next condition is that there must be on either side of the plain zone of the fluting-rollers, rings, or bands of regular fluting-meshes, which take hold of and draw in the goods through the before-described guide. These fluting-meshes may be of any desired breadth on their face; so in regard to their thickness, so long as they bear their due relation to the other parts; so also may the plain zone be of greater or less breadth so long as it bears its due proportion, or near its due proportion, to the other parts or sections of the fluting-rollers. Outside of the fluting-meshes must be located plain bands, which are of like due proportion in breadth, and lying along next the fluting-meshes. Above or in connection with these bands must be devices for pressing down regularly and smoothly the fluted

goods so that it will be capable of being fed through the feeding mechanism of sewing-machines; and outside of these plain bands there may be other fluting-meshes, at least at the extreme ends of the rollers, and the machine so organized must be capable of successful operation in the manufacture of fluted puffing to be the machine described or inquired about.

(All of the answer after the words "I guess," objected to, as not called for by the question, and as not responsive thereto.)

X. 92. In your last answer you state the part, characterizing the part as an arched guide, might be more or less arched; the arch might be turned the under side up. Suppose the guide used in combination with suitable fluting-rollers was not arched at all; suppose it was square on the top and the edges were straight, do you then consider the combination recited in the King claim, letters-patent re-issue 3000, would embrace such a guide in combination, etc., as in the preceding question?

A. The simple modification of one particular detail of the guide would not change the combination, unless that modification destroyed the operation and the result. What I mean to be understood is, that the simple fact of making the arched guide with some change of form does
207 not necessarily destroy its equivalency; it might be made square so as to do that; it might be extended in many parts or portions so as to destroy its equivalency. I would like to see the guide or portion that you intend by the question, in order that I might answer positively.

X. 93. I have not a guide at my command now already made, but I will describe such a guide as I contemplate, so that you can probably understand it. Suppose a piece of wood or metal of a shape of an oblong square, a half inch or three quarters either in breadth, about two inches more or less in length, and a quarter of an inch more or less in thickness, so as to present a raised surface with a square top instead of an arched top, fitting upon which there is placed a top of either wood or metal, so as to leave an aperture through which material to be puffed could be fed to a pair of fluting-rollers, such as is described in the Weitling machine, or in letters-patent "Exhibit, Re-issue 3000," would such a guide be embraced in the combination as patented in re-issue Exhibit 3000?

(Objected to by complainant's counsel, as inquiring an opinion about a construction of mechanism, the existence of which has not been proven in these suits.)

A. I think a quarter of an inch in thickness in that part of the guide would afford a taking up in breadth more than is contemplated, or would be likely to be used in a puffing of the description specified in the "Exhibit, Reissue 3000;" considerably less might possibly answer badly. It certainly would be a construction indicated or illustrated; still in a broad puffed portion with a cap part, considerably extended at the edges of the oblong square piece, it might answer to produce a puffing not altogether unlike what is contemplated.

X. 94. What I desire you to answer is, whether or not you think a guide of that shape, in combination with fluting-rollers, etc., would be the combination embraced in complainant's letters-patent re-issue 3,000, without a special regard to the exact nature of the product, or the result upon the puffing produced?

208 A. I answer no, and for an explanation of this answer, which I think ought to be satisfactory, I refer you to my three preceding answers, and to a great many other questions and answers in this cross-examination.

X. 95. Then I understand you to say in your last answer that the combination recited in the King claim in letters-patent re-issue 3000 does not include every combination of, first, an implement for operating on the material in such manner that it is curved transversely, and made to occupy less breadth horizontally before passing through the fluting-rollers, and secondly, a pair of fluting-rollers substantially like the fluting-rollers embraced in the Weitling machine, or in the letters-patent re-issue 3000?

A. I do not see how I shall be able to make you understand (by any answer I can give) my views on this point, if you cannot draw that understanding from my previous answers. I therefore refer you to my answer to the 94th cross-question in its full breadth.

X. 96. I am not able to draw from your preceding answers, nor from your last answer, an unequivocal opinion upon the proposition in my last question. I would therefore be obliged to you if you would answer as plainly and as concisely as possible that question, even though it involves some repetition of what you have heretofore said?

(Objected to on the ground that the question asked has already been asked and answered repeatedly.)

A. I will not pretend to say but what you or some other man may conceive of some sort of construction of guide that would take in the breadth of the material opposite the plain zones and the fluting-meshes, as described in the re-issue 3000, that would be substantially different from the guide therein described. As to the supposed guide I will not pretend to say whether it is or is not, (without the production of the said implement,) unless my previous answers afford that information.

209 X. 97. Please look at "Exhibit, Robjohn Machine," and guides, when combined as represented in the drawing of the Robjohn patent, and state whether or not that machine and guide when combined, as represented and described in said Robjohn patent, does not contain a combination of, first, a guide for operating upon a strip of material before it passes to the fluting-rollers, and, secondly, a pair of fluting-rollers for operating upon the material after it has passed through the guide?

A. It does, to both branches of the question.

X. 98. Is the guide or guides, as represented and described in the said Robjohn patent, as combined with the said Robjohn machine, composed of two pieces of sheet metal, secured one over the other, at such a distance apart as to permit the passage of the fabric or cloth between them; and is not the guide curved, or arched transversely, so that the cloth or fabric passes between the two pieces of the guide, and is caused to occupy less breadth horizontally than it did before it passed through the guide?

A. The guide, in the Robjohn patent, is a folding or flattened tube, with one or both sides bent up over and down, so as to deliver from its narrow or folded end the piece of goods into another flattened pipe or discharge aperture, (with which it is used,) the fabric passing out of the discharge tube into and between fluting-rollers, in a folded state, on a horizontal line, or line transverse to the length of the material or fabric, and is nothing more or less than a folding mechanism, which will, in operation, deliver a double thickness of fabric into the fluting-meshes or machine. It may be said to be arched in its central longitudinal section, but is not at either end, and will not deliver goods in an arched condition into the fluting-rollers.

X. 99. I do not think that your answer responds to my question. I want to know if the guide is composed of two pieces of sheet metal,

secured one over the other, at such distance apart as to permit the passage of the cloth or fabric between them?

A. Yes.

210 X. 100. Now would not the cloth or fabric, passing between those pieces of sheet metal, occupy less space horizontally than before it passed through the guide?

A. Certainly; only about half the breadth, as stated.

X. 101. Does not the combination of the guide with the Robjohn machine, so far as the machine is concerned, consist of the fluting-rollers, having two rings of fluting-teeth, separated by an open space?

A. Yes.

X. 102. In your opinion, does the combination recited in "Exhibit, Re-issue 3000" include the combination recited in the Robjohn patent?

A. No.

X. 103. Please look at Exhibits S and T, and state whether or not said guides are implements suitable for being used in combination with fluting-rollers, for the purpose of guiding the material to the same?

A. Yes.

X. 104. Are they not composed of two pieces of sheet metal, or of one piece folded above the other, and the ends soldered together, so as to leave an aperture between the upper and lower surface, so as to admit the passage of the material through the space when fed to the fluting-rollers?

A. Yes.

Adjourned to Saturday, March 7, 1874, at 10½ a. m.

NEW YORK, *March* 7, 1874—10½ a. m.

Present, counsel, as before, and the witness, Kittle, for further cross-examination:

X. 105. Look at "Exhibit, Robjohn Machine," and state whether or not that machine contains strippers and pressers?

A. It does.

211 X. 106. Please state whether or not the Robjohn machine, constructed with the pressers and strippers, is or is not a fluting-machine, and if the rollers are not what is known as fluting-rollers?

A. It is a fluting-machine, and the rollers are fluting-rollers.

X. 107. State whether said fluting-rollers have not smooth spaces between the fluting-teeth?

A. They have very narrow.

X. 108. Look at "Exhibit, Muller, No. 2," and "Exhibit, Muller, No. 5," and state if they are not substantially the same—the difference being that one is metal and one paste-board, and the said guides movable in the metal one?

A. Yes, they are.

X. 109. Is the guide No. 5, in your opinion, in the nature of a guide to be used with fluting-rollers?

A. Yes; it is.

X. 110. And when so used, would it not lead the material to be fluted into the fluting-rollers?

A. Yes.

X. 111. And, when so fed to the rollers, would not the arched portion of said guide, "Exhibit, Muller, No. 5," have a tendency to curve the material to be fluted transversely thereon, so as to enter the rollers in a more fulled condition in the centre of the material?

A. It would.

X. 112. Would not said guide, if used in its most favorable condition, in combination with the fluting-roller mentioned in "Exhibit, Re-issue 3000," in the place of the arched guide E, mentioned in said re-issue, have the effect to curve or arch the material transversely, as it passes through said rollers?

A. If it was adapted in breadth to the fluting-rollers, and used for manufacturing one section or row of fluted-puffing, it would; and it would perform very well for that purpose, if the top piece of the rear slip portion of the guide was extended out over the arch, or its sides made to extend out to the inner end or edge of what might be termed the fixed guide.

212 X. 113. "Exhibit, Muller, No. 5," consists of two pieces of metal, one stationary and one removable, does it not?

A. It does; and also of adjustable and removable side-guides, located mainly in front of the rear removable guide.

X. 114. Then I understand you to say, or I understand it to be your opinion, that when "Exhibit, Muller, No. 5," is used in combination with a pair of suitable fluting-rollers, the combination would consist of or contain two implements; first, a guide for operating upon a strip of material before it passes to the fluting-rollers; and, secondly, a pair of fluting-rollers for operating upon the material after it has passed through the guide. Is that so?

A. Yes.

X. 115. I will now ask you whether the guides S and T, when used in combination with suitable fluting-rollers, would not consist of, first, a guide to act upon the material before it entered the fluting-rollers, and, secondly, of a pair of fluting-rollers to act upon the material after it passed through the guide?

A. Yes, they would; supposing, as in the previous questions and answers, the guides to be properly located and fixed in front of the fluting-rollers, so as to lead or guide the goods between the same.

X. 116. Suppose the fluting-rollers to contain plain spaces or zones immediately in front of the guides S or T, or the "Muller Exhibit, No. 5," with rows of fluting-teeth each side of the plain zones, would there be any difference in the shape or configuration of the material where it would pass through the plain zones, assuming, as a matter of course, that the material was properly prepared, and the rollers heated? If so, please state, as near as you can, what you think the difference would be in the shape or configuration.

A. There would be a difference, I think, provided it is intended by the question that the plain spaces on the fluting-rollers was considerably less than the breadth of the guides, and the material filled in breadth the guides, so that it would be grasped and carried along

213 by the fluting-meshes; then, in the case of the guides S and T, the material would be fluted on its edges and regularly gathered on its centre, or fluted in its whole breadth; but in the case of "Exhibit Muller, No. 5," it would have the additional feature of irregularity, in consequence of the surplus in breadth which would be afforded by the arched centre, which, however, would be very slight, unless the fluting took up comparatively the greater breadth of material fed through the rear slip of the guide, "Exhibit, Muller, No. 5."

X. 117. Suppose the arched portion of the guide, "Exhibit, Muller, No. 5," was larger, would that increase the irregularity of the surplus in breadth of the centre of the puffing, or would it increase the breadth or fullness of the centre of the puffing, without increasing the irregularity of its shape or conformation?

A. I think, with that modification, the goods would be gathered into the fluting-meshes with diagonal folds in the material, and such folds would run into the fluting considerably, and that the central portion over the plain part of the rollers would take a configuration conforming thereto; though there doubtless would be greater fullness in the centre.

X. 118. Would the fullness in the centre of the puffing or goods, opposite the arched portion of the guide, with the arched portion of "Muller Exhibit, No. 5," enlarged as in the last question, or in the condition it now is, be considered a puffing or a puffed centre?

A. I think it would be considered a puffed centre of the character indicated by my last answer.

X. 119. Please look at the exhibit, file-wrapper, and patent of complainant's exhibit, 59036, and say whether or not the specifications and patent describes a fluting-machine or a pair of fluting-rollers; and, if so, whether you understand the machine or fluting-rollers therein described?

A. Yes; the exhibits referred to describe fluting-rollers or a fluting-machine, and I think I understand the same.

X. 120. Please describe the fluting-machine therein mentioned.

214 A. The machine therein mentioned is simply a pair of fluting-rollers, having plain bands at the ends, of any desired breadth of fluting-meshes, said plain bands or flanges operating to flatten the fluted materials so that the stitching may be put into said bands by a sewing-machine.

X. 121. Do you understand that said fluting-rollers have plain zones between the fluting-meshes?

A. Not exactly; I think the description calls for a machine, so far as the rollers are concerned, considerably like the Robjohn machine, with the dividing spaces between the fluting-meshes, on one of the rollers being raised into what he calls a flange, more properly a ring or section, of sufficiently greater diameter to press onto the fluted material, so as to leave it in a compact or double thickness, in a condition that it could be fed through a sewing-machine and stitched.

X. 122. Suppose the guide, "Muller Exhibit, No. 5," in its present condition, or with the arched portion somewhat enlarged, and used in combination with the Weitling machine, without the Weitling bar and standards, in such a way as to feed the rollers with said guide, what shape or configuration would the puffing have so produced? Look at Weitling puffing, No. 2, and state if it would not be similar to that, with the centre row of puffing more full and the crinkled or waving surface more distinctly defined.

A. Of course I cannot tell exactly what the appearance would be, but I think quite likely that the exhibit referred to in the question would be about what would be produced under the best conditions.

X. 123. Would not a guide of the character of "Muller Exhibit, No. 5," with its arched portion, have the effect, all other things being equal, to give the puffed centre a greater breadth or fullness than that in "Exhibit, Weitling Puffing, No. 2?"

A. I think not.

X. 124. In your last answer you say you think not; is that because the puffed centre is pretty well puffed up in Weitling puffing, No. 2?

A. Yes.

215 X. 125. Is it the characteristic of all puffing to be irregularly full in the centre?

A. Yes.

X. 126. Will not all puffing so irregularly fulled in the centre stretch latterly?

A. Yes.

X. 127. Does your reply to the last question but one apply to all puffings, whether made on the Weitling machine or on the machine "Exhibit, Re-issue 3000," or by hand-made, for the last fifteen years?

A. All that I know anything about.

X. 128. Please look at "Exhibit, Weitling Patent," and state what it is for, as mentioned in the body of the patent.

A. I quote from the Weitling patent, second paragraph of the written specification: "My invention has for its object to produce a roll or rollers for fluting-meshes, capable of being made to vary the pattern or design of their impress, and consists in forming the roll, or rollers, of a hollow mandrel and one or more removable sleeves, as will be herein after more fully explained. As the main feature of my invention rests in the construction of a roll or rollers, I will describe them accurately, leaving the drawings alone to explain the other parts;" then proceeds the description of the manner of securing and arranging the crimping and embossing rings on to the spindle, and closes with the claim, as follows: "A roll, or rollers, for fluting meshes, composed of a hollow heating-mandrel and one or more removable corrugated sleeves, substantially as and for the purposes set forth." I understand, from the description and illustrations, the invention to consist in adapting two spindles, properly mounted, to the reception of sleeves or rings having distinct configurations on their faces, or peripheries to work in pairs that will mesh into each other, one on each opposite spindle, and be capable of change, by the pairs, to emboss, or print, or flute definite and well-defined figures upon material passing between the faces of such rings, by the rotation of the rollers, and also means of secur-
216 ing the same, to wit, the rings or sleeves together, two or more on a spindle, by pressure on their end or faces, so that the figure may be varied. The idea of the inventor doubtless was to save the expense of making and changing the rollers for each separate patent or figured trimming which might be required.

X. 129. Then you understand the patent to admit of the use of plain rings, or fluted rings, in conjunction, or to leave a plain space on each roller, in between fluted rings, if desired to produce different patterns?

A. Without a doubt, such rings could be used on spindles, as they are constructed; however, the only thing in the patent indicating the employment or use of such rings is what may be termed washers, which are used to fill out the space between the shoulder on the mandrel and the nut at its end, where a less number of figured rings are required for the pattern to be produced, to fill up the space that exists between the shoulder and the nut when fully screwed up, and in some instances to be used to break a combination of the figure.

X. 130. Are not the letters-patent for an improvement in fluting-machines?

A. Yes.

X. 131. What do you understand by the term used by you of mechanical equivalents?

A. One device that can be substituted for another without substantial change in parts or operation of the machine or organization for a given result.

X. 132. Do you understand that there is any marked difference between a row of fluting or a row of crimping, where, for instance, the article of fluted puffing described in letters-patent re-issue 3001, or in

Weitling puffing, No. 2, there was a row of crimping of the same width and same shape and same depth in the flutes, would or would not the difference be only in name and not effect the result?

A. Only in name, in crimping and fluting.

X. 133. Would the machine "Exhibit, Letters-patent Re-issue 3000," without smoothers or pressers, be the patented machine described in letters-patent re-issue 3000?

217 A. I think not; I think they are a part of the organized rollers or machine, and that organization must have substantially those devices.

X. 134. Is it your opinion that a machine constructed as the machine patented in letters-patent re-issue 3000, without pressers or smoothers, would not be the machine patented in letters-patent re-issue 3000?

A. As I have stated before, it is my opinion that, under the scope of the description and claim, there must exist pressers or smoothers, or some analogous device instead of them, to comprise the invention covered by the specification in its breadth.

X. 135. And that a machine without smoothers or pressers, or some analogous device, would not be the machine therein patented, is that so?

A. Yes.

X. 136. The "Exhibit, Pipo Puffing," is unlike the article of trimming described in "Exhibit, Re-issue 3001," in that it is deficient in the regular rows of fluting, &c., you say; will not that kind of puffing stretch laterally, and has it not a puffed centre irregularly waived?

A. Yes.

X. 137. Cannot its outer edges be stitched with a sewing-machine, so as to hold the configuration?

A. It is made by a sewing-machine, I understand, and stitched in the operation.

X. 138. And can it not be used in shirt-bosoms and other articles of dress, as a trimming, as is the case with complainant's "Exhibit, Herman and Lautenbach?"

A. It can be used for trimming in shirt-bosoms and articles of dress.

218 Adjourned to Monday, March 9th, 1874, at 1 p. m.

MONDAY, *March 9th*, 1874.

Present, counsel as before.

Adjourned to April 18th, 1874.

SATURDAY, *April 18th*, 1874.

Present, counsel as before.

SAMUEL P. KITTLE.

Subscribed and sworn to before me, this 18th day of April, 1874.

R. E. STILWELL,
Examiner, &c.

Complainant's counsel puts in evidence a certified duplicate of a model from the files of the Patent-Office, as it now appears in the matter of the application of William Weitling, filed March 8th, 1855, which is marked "Exhibit, Weitling Model, April 18th, 1874, R. E. S., Exam'r."

Also a piece of puffing, which is marked "Exhibit, Complainant's Puffing, April 18th, 1874, R. E. S., Exam'r."

219 U. S. circuit court, southern district of New York.

GEORGE E. KING
vs.
ADOLPH HERMANN AND SIMON LAUTENBACH.

GEORGE E. KING
vs.
ALEXANDER LYLE.

GEORGE E. KING
vs.
ROBERT WERNER.

Testimony taken on part of the defendants for final hearing under the 67th rule of the Supreme Court of the United States, as amended. In equity.

WEDNESDAY, *October 9th*, 1872.

Present, Orlando Dorsey, esq., counsel for defendants, and S. D. Law, esq., and M. A. Kursheedt, esq., counsel for complainants.

220 Adjourned to 10th inst., at 11 a. m.

THURSDAY, *Oct. 10th*, 1872.

Present, counsel as before.

Adjourned at request of defendant's counsel to Monday, the 14th inst., at 12 m.

MONDAY, *October 14th*, 1872.

Present, counsel as before.

Adjourned to 15th inst., at same hour.

TUESDAY, *October 15th*, 1872.

Present, counsel as before.

JOHN ANDREW PIPO, being called and duly sworn as a witness in behalf of the defendants, deposes and says:

Q. 1. What is your name, age, residence, and occupation?

A. John Andrew Pipo; 30 years old; 269 Madison st., Hoboken, N. J.; I am a machinist.

Q. 2. State whether or not you are acquainted with flutings and trimmings for shirt-bosoms, dresses, &c.; and, if so, state for how long a time.

A. I am acquainted with trimmings since 1859.

Q. 3. Are you acquainted with flutings, and for how long?

A. Yes, sir; since about 1861.

Q. 4. Did you ever make any puffings? and, if so, state how long ago.

A. I made puffings in 1860.

Q. 5. Have you made any puffings since that time?

A. Yes, sir; I made them at different times since 1860.

Q. 6. State what kind of puffings you have made.

A. I made them on a sewing-machine.

Q. 7. Describe what kind of puffing you made on a sewing-machine.

221 A. I made puffings, both sides flattened down by pressure of

the foot, and puffed centre with irregular plaits in it which became regular after stretching the goods out.

Q. 8. State whether or not the puffing was gathered inside of the flattened borders.

A. Yes; it was.

Q. 9. State whether the puffing spoken of was full and puffed in the centre, inside of the gathers.

A. It was according to the fullness you ran the goods; if you run the goods full you have more fullness, if you run them slack you have less.

Q. 10. State whether the puffing in the centre inside of the gathers was in an irregular shape when it came out of the machine.

A. Yes.

(Counsel for defendant offers as an exhibit the affidavit of the witness sworn to January 9th, 1872, before Addison Thomas, notary public, in the suit of King vs. Lyle, and the same is marked "Exhibit Pipo Affidavit, Oct. 15, 1872, R. E. S., Ex."

Counsel for complainant objects to the introduction in evidence of said exhibit on the ground that is incompetent.

Defendant's counsel offers as an exhibit the piece of ruffing attached to said affidavit, and marked "A," which exhibit is now marked "Oct. 15, 1872, R. E. S., Ex.")

Q. 11. Look at the piece of puffing marked "A" on your affidavit, and state whether you have seen puffing similar to that; and, if so, state how long.

A. I seen puffing made similar to that on the sewing-machine in 1862 or 1863—I am not certain which—put in shirt-bosoms.

Q. 12. State whether the puffing that you saw similar to this would stretch laterally or crosswise.

A. Yes, sir; it will.

Q. 13. Did it have flattened borders?

222 A. Yes, sir, it had; by the pressure of the foot of the sewing-machine the edges or borders were pressed down.

Q. 14. What is the foot of the sewing-machine?

A. Some call it cloth-presser. It is that piece of the sewing-machine which the feeder goes against, and by that way the motion of the goods is made.

Q. 15. When you say the goods are made, do you mean the puffing is made?

A. Of course.

Q. 16. Where did you see that puffing?

A. I saw it in different stores; retail stores.

Q. 17. State whether these stores were in the city of New York, or state where they were if not in the city of New York.

(Objected to as leading.)

A. I saw it up in the show-window of Lord & Taylor; it was in the city of New York.

Q. 18. State in what city or where those stores were situated in which you saw the puffing mentioned in your answer above.

A. It was in the city of New York.

Q. 19. Have you seen puffings of different designs or shapes or patterns frequently? And state how long ago.

A. Yes; I have seen puffings of different designs since 1860.

Q. 20. Have you any puffing with you like the puffing you made in 1862?

A. No, sir.

Further examination adjourned to Monday, October 21st, 1872, at request of defendant's counsel.

MONDAY, *October* 21*st*, 1872.

Present, counsel as before.

Continuation of the witness Pipo.

223 Defendant's counsel offers in evidence two pieces of puffing, which are marked "Exhibit, Pipo Puffing, Oct. 21st, 1872, R. E. S., Ex."

Q. 21. Look at "Exhibit, Pipo Puffing," and state whether you have seen puffing of this description before, and state how long ago; state the year you first saw it.

A. I made it myself, not the sample, but the same thing, in 1860.

Q. 22. State whether this "Exhibit, Pipo Puffing" has an irregular waved and puffed centre, between two rows of gathers.

(Objected to by complainant's counsel as leading.)

A. Yes; it has.

Q. 23. Please describe this "Exhibit, Pipo Puffing," as particularly as you can, stating what kind of borders it has; and, if it has gathers, state where the gathers are located; and, if any part of it is puffed, state where the puffing is located in reference to the gathers.

A. The puffing is formed of a piece of muslin, with gathers on both sides, of which the outside borders, as you call them, are flattened down by the cloth-presser of the machine; inside the stitching is gathering on both sides, which forms the puffed centre.

Q. 24. State where the puffing is located in reference to the rows of gathers.

A. Between the gathers.

Q. 25. Do you mean that the puffing or the puffed part is in the centre of the article?

A. Yes, sir.

Q. 26. State whether or not this article marked "Exhibit, Pipo Puffing" has all the parts as you have described them, to wit, the flattened borders and the gathers inside of the flattened borders, and the puffed centre as it comes out of the machine, without being laundered or dressed in any way.

A. Yes, sir.

Q. 27. Do you know whether or not that article of puffing marked "Exhibit, Pipo" was sold in New York or elsewhere? and, if so,

224 state what year as far back as you can remember, or whether in small or large quantities.

(Objected to by complainant's counsel, on the ground that no notice of any sale of any article claimed to be the same as the article patented in "Exhibit, Re-issue 3001" is averred in the answer in either of these cases to have been made except in the city of New York, and in Hoboken, in New Jersey, and that the question put the witness should be limited to the city of New York and Hoboken, New Jersey.

And further, that the witness cannot be inquired of concerning any sale of puffing made by any person or persons except those named in the answer herein, and cannot be inquired of as to any sales whatever except those within the personal knowledge of the witness, within the localities mentioned in the answers in these cases.)

A. I don't recollect the year: it was either the latter part of 1860 or 1861 that it was sold. It was sold at Douglass & Sherwood's, in White street, New York City, in the form of skirt-fronts, as much as I recollect, and the skirts were called pearl-robed skirts. They were making

large quantities of it. After this they made it and sold it at 11½ College Place. I forget the name of the firm. I think Oppenheimer was one. I am not positive of the last that I said.

Q. 28. When you say that "I am not positive of the last that I said," what do you mean?

A. I mean about the name of the firm at No. 11½ College Place.

Q. 29. Do you know whether or not this kind of puffing, as you have described it in your previous answer to question 23, was sold in the city of New York; if so, state in what year, and by whom sold?

(Objected to by complainant's counsel on the ground that the witness cannot be inquired of concerning any sale of puffing by any person or persons except those named in the answers herein.

225 A. I don't know.

Q. 30. Question repeated.

(Same objection, and the further objection on the ground that the witness has already answered the question repeated.)

A. It was sold by Douglass & Sherwood. I understood in the last question, if the article was sold in the city of New York, to stores to sell again; that I don't know.

Cross-examined by S. D. Law, esq., counsel for complainant:

X. 31. Who made the puffing marked "A, Oct. 15th, 1872," attached to the paper marked "Exhibit, Pipo Affidavit, Oct. 15th, 1872?"

A. I don't know.

X. 32. Do you know where that puffing marked "A" on the paper came from?

A. No, sir.

X. 33. When did you first see that piece of puffing marked "A" on that paper; was it the day you swore to that paper or affidavit?

A. I can't tell. It may be that I saw it, and it may be that I didn't see it. I saw several pieces, but I can't swear to this.

X. 34. Where, in what particular place, did you swear to that affidavit?

A. It was down in the same house where M'r Dorsey keeps his office. It was not in his office

X. 35. When you made this affidavit who was the counsel, or the lawyer, of Alexander Lyle, mentioned in the affidavit, and who had been sued?

A. I don't know.

X. 36. At whose request did you make that affidavit?

A. M'r Werner, here present, came to my place and asked me if I knew anything about puffings and such things, and I told him yes, and he asked me if I wouldn't go with him and give an affidavit of

226 what I knew about it, and I went with him where this affidavit was made.

X. 37. Was this affidavit made in the office of a M'r Whitehead, or in whose office, if you know?

A. I don' know whether M'r Whitehead keeps office in the same room where I made the affidavit, as I was a stranger there.

X. 38. When did you make that affidavit; how long ago?

A. I couldn't tell positively, as I didn't think any more of it.

X. 39. About how long ago should you think it was?

A. About two months. It may be a little over or less. I couldn't tell. I didn't pay any further attention to it.

X. 40. Did you yourself read over that affidavit before you signed it, or was it read to you by somebody else? And, if so, give the name of the person who read it to you.

A. I didn't read it myself. As much as I recollect, M'r Dorsey read it to me.

X. 41. Can you tell what that affidavit stated; can you remember what you swore to at that time?

A. I recollect some parts; as I said, I did'nt pay any further attention to it.

X. 42. State now, as near as you can, what you swore to in that affidavit.

A. I swore I was acquainted with puffings and trimmings since 1860, or 1859, I believe, and made puffings in 1860. I don't recollect anything more.

(Counsel for defendant asks that the affidavit referred to may be read to the witness for the purpose of asking him whether that was the affidavit he made at the time referred to, and for the purpose of refreshing his memory as to the matters stated therein. Counsel for complainant declines at the present time to read that affidavit, as he is seeking to test the memory of the witness.)

227 X. 43. The signature, J. A. Pipo, shown you, is your signature, is it not?

A. Yes, sir.

The examiner is requested to put under that signature his init'als and the present day of the month; the signature marked by the examiner "R. E. S., Oct. 21st, 1872."

X. 44. At the time you made that affidavit was the pieces of trimming marked "A" actually fastened to the paper you signed, or was it loose and separate therefrom?

A. It wasn't fastened.

X. 45. Did you yourself see the trimming marked "A" fastened to the paper you signed and swore to?

A. No, sir.

X. 46. What is your present business?

A. I do goods up for other people, and work as a machinist.

X. 47. What do you mean by doing goods up for other people?

A. People furnishing me the material and I make them up in bosoms.

X. 48. What kind of bosoms do you make?

A. Puffed bosoms and plain bosoms.

X. 49. For whom are you now making up bosoms?

A. Mess'rs Bloom & Weil and Kitzinger Bro's.

X. 50. Have you ever made up any bosoms for the firm of Hermann & Lautenbach?

A. Yes, sir.

X. 51. On what kind of machines do you now make puffed bosoms?

A. On a Wilcox & Gibbs and Wheeler and Wilson's.

X. 52. When did you make the trimming marked "Pipo Puffing?"

A. I made that trimming this morning, and I made the very same trimming in 1860.

228 (Last part of answer, after the word "morning," objected to by complainant's counsel as not called for by the question and as a volunteer statement by the witness.)

X. 53. On what kind of a machine did you make this puffing, "Exhibit, Pipo;" was it a sewing-machine, or what?

A. It was a Wilcox & Gibbs sewing-machine.

X. 54. What kind of an attachment was used in that machine to make the gathers on each edge of the puffing?

A. A ruffle attachment.

X. 55. Describe it.

A. It was a knife; works on the arm which is connected with an eccentric, which makes the movement of the knife.

X. 56. Is the stitching along the edge of the gathers made at the same time the gathers are, or done afterwards?

A. One row of stitching is done at the same time; in the samples lying before us a second row has been put in afterwards to prevent it from ripping.

X. 57. In making trimming like this sample, "Ex., Pipo," is the second row of stitching, which you refer to in your last answer, generally put in, or only the one row of stitching first put in?

A. Only one row, except people want it very strong, to cut up in short pieces; then sometimes the second row is put in.

X. 58. In this sample, "Ex., Pipo," the gathering or plaits so far as they are flattened by the pressure-foot of the sewing-machine, are they not?

A. Yes, sir.

X. 59. In the making of trimming like this "Ex., Pipo," is one edge of the trimming gathered and sewed first, and then the other edge gathered and sewed, or both edges made at the same time?

A. In those pieces one edge is done first, then the other; but
229 I have made them both at the same time.

X. 60. When you have made such trimmings, finishing both edges at the same time, the knife for making the gathers or plaits, and the needle for sewing is duplicated, is it not; that is, you have two needles and two plaiting-knives, and two pressure-feet, do you not?

A. I have two needles, but about the cloth-pressers, I have sometimes two cloth-pressers and sometimes one, and sometimes two knives and sometimes one, according to the kind of goods I was going to make. If I was going to make a puffed centre, I cut the goods a little wider than the space between the two gauges that guide the goods, then I use two feet or cloth-pressers and two knives. If I want a straight plait I use only one foot or cloth-presser, and one knife.

X. 61. This trimming "Exhibit, Pipo Puffing," is just like, I understand you to say, that which you made in 1860; am I correct?

A. Yes, sir.

X. 62. Have you any specimens or pieces of trimming similar to this exhibit which you made in 1860?

A. I don't have any, except there should be any yet in existence, which I made ladies presents of.

(All of the answer after the first four words objected to by complainant's counsel as irresponsive and volunteered.)

X. 63. Did you make in 1860 any trimming like or similar to this "Exhibit, Pipo," to order or for persons who kept the same on sale?

A. No, I was with Douglass & Sherwood. I made it for them; that is to say, I didn't make it, the girls made it, and I kept the machines going which I myself invented.

X. 64. How long was you with Douglass & Sherwood when such trimming was made there?

A. It was the second time I came there; it was about one or
230 two months, then I had the ruffling going, and about two months further I had samples of the puffing. It was done on a Wheeler & Wilson machine.

X. 65. State the time, the year and month you went there the second time, as you have said.

A. As much as I recollect it was in July or August, 1859.

X. 66. While you were with Douglass & Sherwood at that time did

you make puffing, as you call it, with two plaiting-knives, two pressure-feet and two needles, using them at the same time?

A. No.

X. 67. Did you make any puffing like the piece "Exhibit, Pipo," for use by them in their business?

A. Yes.

X. 68. How much and for what was it used?

A. We made thousands of yards; I couldn't tell the number of it; it was used on skirt fronts.

X. 69. One edge was gathered and sewed first, and then the other, as I understand it?

A. Yes, sir.

X. 70. Can you give the names of the girls who worked at Douglass & Sherwood's, and worked the machines which you say you invented for making such trimming or puffing?

A. I know of one of them, Maggie Ferguson, and I don't know where she is now; I only knew the girls by numbers, as their machines were numbered.

X. 71. You say you have seen puffing similar to this exhibit since 1860, that was made on a sewing-machine like this "Exhibit, Pipo Puffing," was it not?

A. Yes; I have seen it on a sewing-machine and a fluting-machine.

X. 72. Since you worked for Douglass and Sherwood at the time you have mentioned, have you made trimming like "Ex., Pipo Puffing," and sold it to dealers or made it for dealers?

A. Yes, sir.

231 X. 73. For whom, and when?

A. I made it in 1864 for Hermann & Lautenbach.

X. 74. Did you make it in the same way you made it for Douglass and Sherwood?

A. Some of it; some of it I made with two pressure-feet and two knives.

Adjourned to 23d inst., at 11 a. m.

WEDNESDAY, *Oct. 23d*, 1872.

Present, counsel as before.

Continuation of the witness Pipo.

X. Q. 75. You say you saw in 1862 or '63, puffing similar to that marked "A" on the paper "Exhibit, Pipo Affidavit;" was that puffing you saw in 1862 or '63, like this piece marked "Exhibit, Pipo Puffing, Oct. 21st?"

A. It was a little different from that; the centre was more raised up; in other respects it was alike.

X. Q. 76. It was made on a sewing-machine, the same as you have before described, was it not?

A. Sometimes it was. Some of it I didn't have in my hands. I couldn't tell.

X. Q. 77. Did you yourself make some of that which you say was made as you have before described?

A. Some I made, but I did not sell it. Some I saw of other manufacturers. I saw some in Lord & Taylor's show window, and some in other stores, and a great deal of it around town.

X. Q. 78. Do you know who the other persons were who made such puffing and trimming which you saw at Lord & Taylor's, and other places?

A. No, sir.

X. Q. 79. Was that puffing or trimming, which you say you saw at Lord & Taylor's and other places, in your opinion, from your examination of it, made with or on a sewing-machine, in the same manner you have described?

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A. Some of it was; some of it I couldn't judge whether it was made on a sewing-machine or a crimping-machine; I didn't have it in my hand.

X. Q. 80. State the time, month, and year, as near as you can, when you saw such article at Lord & Taylor's and other places.

A. As much as I recollect it was in the latter part of 1860.

X. Q. 81. How do you fix the time; by what circumstance if any?

A. I had a ruffling in the latter part of 1859 out; it was about a year after that that I saw puffing, I thought, already in one year so many had it.

X. Q. 82. Did the article you made in 1860, as you have stated, which is like the piece "Exhibit, Pipo Puffing," have as much fullness between the gathers as such exhibit, or was the fullness of that made by you in 1860 less than in this exhibit?

A. It was different; some of it had more, and some had less.

X. Q. 83. How did you give such article more or less fullness between the plaits or gathers?

A. By regulating the motion of the knife in the single sewing-machine, and by cutting the different width of goods in a double-needle machine.

X. Q. 84. When you say by regulating the motion of the knife, do you mean so that the knife will make a finer or a coarser plait?

A. No, I give the knife a longer stroke for fulling more goods in; the size of the plait, large or small, is regulated by the length of the stitch.

X. Q. 85. You say in one of your answers, "If you was going to make a puffed centre, you cut the goods a little wider than the space between the two gauges that guide the goods;" describe what these gauges are, and how they are fixed to a sewing-machine.

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A. I had two pieces of steel screwed down parellel to both cloth-pressers of the machine, where they were leaning on to the cloth-pressers. They were about an inch and a half long, standing out from the cloth-pressers, towards where the goods went into the machine, from the commencement of the cloth-presser outward to the end of the steel, they slanted off, so that they were a quarter of an inch wider at the outside end than at the cloth-pressers, covered half way with a piece of brass to prevent the goods from slipping out; the goods went in between these pieces of steel, and under that piece of brass.

X. Q. 86. Before the goods were passed into the sewing-machine to be so gathered and sewed, was the goods dampened or starched or prepared in any way?

A. The first couple of months I had to dampen them, but after that I got over it and could do it without any operation, taking the goods from the piece.

X. Q. 87. In your last answer do you refer to making the ruffling you say you got out in 1859?

A. Ruffling and puffing. I did it with all kind of goods that were in that line, ruffling or puffing or all kinds in that work.

X. Q. 88. In making such article, ruffling, puffing, &c., as you have described, was the machine or any part of it heated by means of any artificial heat?

A. I tried it once in 1864, with a small brass cylinder, which acted as cloth-presser, but I dropped it again on account of finding no advantage

in it, after using it a couple months, on account of the girls burning their fingers too often on the cylinder.

Redirect:

Q. 89. In your answer to cross-question 39, you say about two
234 months; it may be a little over or less; I could not tell; I did not pay any further attention to it;" state whether or not it was cold or warm weather, if you can recollect.

(Objected to by complainant's counsel as improper in form and inadmissible.)

Q. I recollect that it was cold weather. I was sick and M'r Werner fetched me over in a carriage, and my wife gave me a shawl to wrap around me.

Q. 90. Can you, from the circumstance you have just mentioned in your last answer, come near fixing the date of your affidavit referred to in cross-question 39? If so, mention it.

(Objected to, as the witness has already testified as to his recollection of the matter.)

A. No, sir; after what I thought of now it must have been very early in the year. I can't fix any date.

Q. 91. State whether or not you recollect now of saying anything in your affidavit *of* about having made puffing for yourself, and manufactured for Hermann & Lautenbach at 312 Brodway.

A. I am not certain that I said that I made it for myself, but I recollect that I said I made it for Hermann & Lautenbach in the latter part of 1863, or commencement of 1864. I can't remember distinctly my words.

Q. 92. Do you recollect whether or not you said anything in your affidavit above referred to about a design?

A. Yes, sir; I recollect now. I said there was shown me a piece of puffing, which I said was puffing, but the design in it was something new.

Q. 93. Do you remember saying in the affidavit referred to anything about your being at any time with Douglass & Sherwood?

235 (Counsel for complainant objects to any further inquiries in this line of interrogation of the witness in respect to this affidavit, both on the ground that the affidavit itself is incompetent evidence, and was objected to as such when offered in evidence by defendants, and any inquiry in reference thereto is not pertinent for the purpose of testing the recollection of the witness, and such inquiries are only proper by way of cross-examination and are not permissable to the party calling the witness.

Defendant's counsel says that the counsel for complainants having interrogated the witness as to the affidavit and its contents, and the witness having answered such interrogatories as he then may have understood them, and the attention of the witness not having been called to the several specific statements contained in the affidavit, and the counsel for the complainant having declined to let the affidavit be read to the witness, that he might be asked whether that was the affidavit he made at the time referred to, and for the purpose of refreshing his memory as to the matters stated therein, the defendant's counsel, under the well known rules of evidence, claims the right to interrogate the witness specifically as to the several matters stated in said affidavit for the purpose of having his attention called to said several matters, and for the purpose of refreshing his memory as to the same.

Counsel for complainant says that the assumption of defend-
236 ant's counsel, that complainant's counsel has interrogated the witness as to the affidavit and its contents, is not correct, and there-

fore the argument of defendant's counsel to the objection falls to the ground.)

A. I said something about that, about the time I had been there, I believe, and that I made some puffing there in 1860.

(Counsel for defendants again offers in evidence the affidavit of the witness marked "Exhibit, Pipo Affidavit, October 15th, 1872."

Counsel for complainant objects to the admission of such affidavit in evidence as being wholly incompetent and therefore entirely inadmissable.

Counsel for defendants states that said affidavit having been heretofore offered as an exhibit, and complainant's counsel having examined the witness in reference to said affidavit and its contents, he has thereby made it evidence in the case, and the defendant's counsel has the right to use it to all intents and purposes as evidence, and therefore again offers it in evidence in connection with and as a part of his re-direct examination upon the new matter introduced on the cross examination.

Counsel for complainant repeats that he has not examined the witness as to the contents of the affidavit, but only in reference to the piece of trimming attached thereto, and he further asserts that he has not, on the cross-examination of the witness, gone into new matter or any matter not legitimately within the limits of cross-examination, and he
237 repeats his objection to the introduction of this affidavit as an exhibit, as any part of the evidence of the witness, and insists that such affidavit, if admissable at all, is only admissable to show any discrepancy between the present recollection of the witness as to his prior allegations under oath, and what such allegations actually were.)

T. A. PIPO.

Subscribed and sworn to before me this 23d day of October, 1872.

R. E. STILWELL,
Examiner, &c.

Adjourned to 25th inst., at 11 a. m.

FRIDAY, *October 25th*, 1872.

Present, counsel as before.

ADOLPH HERMANN, being duly sworn as a witness on part of defendants, deposes and says:

Q. 1. What is your name, age, residence, and occupation?

A. Adolph Hermann, about 37 years old; occupation, merchant.

Q. 2. State whether or not you buy and sell puffing, fluting, trimmings, &c.; and, if so, state for how many years you have been doing so.

A. I do sell them, and have done so since 1857.

Q. 3. Have you a partner associated with you in business; and, if so, what is your firm-name?

A. I have; the firm-name is Hermann & Lautenbach.

Q. 4. Have you ever purchased to sell again puffing and other trimmings from Mess'rs Kursheedt & King, M'r King being Geo. E.
238 King, the complainant in these suits? and, if so, state how long since you commenced to purchase from them. State the year, if you can recollect it.

A. I purchased from them to sell again. I think, as near as I can recollect, it commenced at the end of the year 1866.

Q. 5. Was M'r Geo. E. King, the complainant in these suits, a member of the firm of Kursheedt & King at that time?

A. I think so.

Q. 6. State whether or not you manufacture puffings or fluted puffings of any kind, or whether you have done so for the last five or six years.

A. No, sir; never.

Q. 7. Is your business that of a merchant, buying and selling puffings, flutings, and trimmings of that kind?

(Objected to as irrelevant.)

A. Yes, sir.

(Defendant's counsel requests the examiner to mark an invoice for identification, and the same is marked "Hermann Invoice, Oct. 25th, 1872, R. E. S., Ex.")

Q. 8. Please look at the paper marked "Hermann Invoice, Oct. 25th, 1872," and state whether you ever saw that paper before.

(Same objection.)

A. I did.

Q. State what it purports to be.

(Objected to, on the ground that the paper itself is the best evidence as to its contents, and the question is likewise irrelevant.)

A. It purports to be an invoice of puffed bosoms.

Q. 10. Now state who you received that invoice from.

239 (Objected to as irrelevant.)

A. From Kursheedt & King.

Q. 11. State whether or not your firm received the puffing mentioned in that invoice.

(Objected to as irrelevant, and the witness is cautioned not to answer as to any matter not within his own personal knowledge.)

A. We did.

Q. 12. State what is meant by the words "Ristori Puffed Front?"

(Objected to as irrelevant.)

A. It's merely a fancy name.

Q. 13. State as near as you can, what kind of puffing was in those fronts; describe it as near as you can.

(Objected to first of all on the ground that the question is inadmissable under the answers in these suits; that the witness is not named in either of said answers, as a witness to any prior use or invention of the patented article described in "Exhibit, Re-issue 3001," and that there is no allegation in either of said answers as to any abandonment by the complainant of his right to a patent on said article, and that the question is irrelevant under the issues herein.)

A. I think the puffing was just as Kursheedt & King made it at that time.

Q. 14. Did A have what are called flattened borders?

(Objected to as leading and irrelevant, and for the other reasons stated in objections to question 13.)

240 A. It did.

Q. 15. State whether or not it had gathers inside of the flattened borders.

(Same objection continued.)

A. It had.

Q. 16. State whether or not it had a puffed centre.

(Same objection.)

A. It had.

Q. 17. State whether or not the centre puffing was or not irregularly waved.

(Same objection.)

A. It was.

Q. 18. Were you acquainted at that time with M'r Geo. E. King, the complainant in these suits?

A. I was.

Q. 19. Did you or not hear M'r King say about that time that he had a patent for making that puffing?

(Objected to as leading and as irrelevant.)

A. I did hear M'r King say he had a patent.

Q. 20. Have you or not had sufficient experience in handling and in examining puffing and flutings to consider yourself a judge of the different kinds of flutings and puffings.

(Objected to on the ground that the witness should be asked to state what his experience is, not what he considered himself to be.)

A. I do.

Q. 21. Are you well acquainted with the flutings manufactured and sold by the complainant, Geo. E. King?

241 (Objected to as irrelevant.)

A. I am.

Q. 22. Are you acquainted with the puffing manufactured and sold by Robert Werner?

(Same objection.)

A. I am.

Q. 23. Do you consider the puffing made by King, the complainant, and the puffings made by M'r Werner, alike?

(Objected to as irrelevant, and because the word "puffing" is used too indefinitely.)

A. I don't.

Q. 24. Do you know the process by which M'r King, the complainant, makes his fluted puffings?

(Objected to as irrelevant.)

A. I do not.

Q. 25. State whether or not you saw puffings of a similar nature to that manufactured by M'r King, previous to the year 1864.

(Same objection as to question 13, and also on the ground that the expression, "manufactured by M'r King," is too indefinite as a description of the patented article.)

A. I did.

(Defendant's counsel offers as an exhibt a piece of puffing which is marked "Hermann Puffing, Oct. 25th, 1872, R. E. S., Ex."

Complainant's counsel objects to the admission of such exhibit

242 in evidence, on the ground that it is not shown to have any bearing on either of the cases.)

Q. 26. Please look at the article marked "Exhibit, Hermann Puffing, October 25th, 1872," and state whose manufacture it is.

(Objected to on the ground that the question is irrelevant, and the witness is cautioned not to answer as to any matter not within his own personal knowledge.)

A. I think it is Kursheedt & King's.

Q. 27. Do you mean to say by that, that it is the complainant's manufacture?

(Objected to on the ground that it is merely a repetition of the previous question, which the witness has already answered.)

A. I do.

Q. 28. In your answer to question 25, you said, "I did," which question reads as follows:

"State whether or not you saw puffings of a similar nature to that manufactured by M'r King previous to the year 1864." State how long previous to 1864, as near as you can recollect."

(Same objection as to question 25.)

A. I think I saw some of it in 1860.

Q. 29. Was the puffing you saw at the time mentioned by you above similar to "Exhibit, Hermann Puffing, Oct. 25th, 1872, R. E. S., Ex.?"

(Same objection.)

A. It looked similar.

243 Cross-examined:

X 30. Are you one of the defendants in the suit against Hermann & Lautenbach?

A. I am.

X 31. Have you any piece of the "Ristori puffing," of that you purchased from Kursheedt & King, in 1866, as you have before testified?

A. That bill was for puffed shirt-fronts. I have no shirt-fronts on that bill purchased in 1866 on hand, but I might have a piece of "Ristori puffing."

(Complainant's counsel objected to the last nine words of the witness as irresponsive.)

X 32. Do you know how that puffing manufactured by M'r Werner is made?

A. I do.

Q. 33. If you don't know how the puffing manufactured by M'r King is made how are you able to form any opinion as to how the puffings made by M'r King differ from those made by M'r Werner?

A. Because it is a quite different looking article.

X. 34. You say in your answers to questions 25 and 28 that you saw, before 1864 and in 1860, puffings of a similar nature to that manufactured by M'r King; have you any specimens of such puffings which you say you saw in 1860, or before 1864?

A. I have not with me, but can produce them.

(Complainant's counsel notifies the witness to produce such specimens.)

X 35. You say in answer to question 6 that you have never manufactured any puffings or fluted puffings; state whether or not you have ever furnished linen or any other fabric to Robert Werner, the defendant in one of these suits, to be manufactured by him into puffings for you.

244 A. Never.

X 36. Have you ever purchased any puffings from said Werner?

A. I have.

X. 37. Have you any reason to believe that the material out of which the puffings you purchased from said Werner was made was furnished by you or your firm of Hermann & Lautenbach to him?

A. I have stated once before that I had not furnished any material.

X. 38. Have you never sold said Werner any linen or other material suitable for being made into puffing?

(Question objected to by defendants' counsel as immaterial and as not pertinent to the issues, and the answer to which, be it what it may, can have no bearing upon these cases.)

A. I have sold M'r Werner material for other purposes than puffing.

X. 39. Question repeated.

A. Same answer. Not knowing what is suitable for puffing I have sold M'r Werner material for other purposes.

X. 40. Do you not know of what material the puffing you have purchased of M'r Werner is made?

A. No, sir.

X. 41. Do you know whether or not you have purchased from said Werner puffing made out of linen?

A. No, sir.

X. 42. You say you don't know?

A. I don't know.

X. 43. Do you know linen from lawn?

A. I do.

X. 44. Do you know linen from jaconet?

A. I do.

Q. 45. Have you ever examined any of the puffing you say you have purchased from said Werner?

245 A. I have.

X. 46. And still you cannot tell whether the material of which said puffing was made was linen or lawn or jaconet?

A. Not without examining.

X. 47. Do you say that you have never examined any of the puffing you have purchased from said Werner with sufficient care to know whether the material out of which such puffing was made was linen, or lawn, or jaconet?

A. I do.

X. 48. Have you ever personally purchased any puffing from said Werner?

A. I did not.

X. 49. Have you ever had any conversation with said Werner in reference to you or your said firm purchasing puffing from him?

A. I did.

X. 50. State such conversations.

A. Personally I had very little conversation with him; my partner ordered the goods.

X. 51. Question repeated.

A. Same answer.

(Complainant's counsel gives notice of his intention to strike out the direct testimony of the witness on the ground of his refusal to answer cross-questions 50 and 51.

Counsel for the defendants says that the witness has answered the questions referred to as he understood them, and he has manifested no unwillingness to answer any questions put to him by counsel for the complainant, and it is the duty of the counsel for the complainant to put his questions in a different form, when he thinks the witness

246 has not understood him; and counsel for the defendants asks permission here to ask the witness if he has any reluctance to answer the questions put to him by complainant's counsel, and whether he has not tried to answer them as he understood them.)

X. 52. How did you answer said question 50?

A. The answer to this question is the same as already given; that is all I can recollect.

(Counsel for complainants objects to said answer as irresponsive.)

X. 53. Do you understand the English language?

A. I object to answer that; I say, yes.

X. 54. Have you ever purchased from David Werner any fluted puffing made up in pieces of several yards each?

A. I have.

X. 55. Have you ever remarked the materials out of which such fluted puffing, made in pieces of several yards, was made?

A. I might have.

X. 56. Have you not remarked that some or all of such puffing last mentioned was made of lawn?

A. I can't recollect.

X. 57. What is the business of your firm of Hermann & Lautenbach?
A. Selling white goods, trimmings, &c.
X. 58. Do you or not do, or have you not done within the last year, any manufacturing business?
A. No, sir.
X. 59. Have you any connection with the firm of Hermann & Lautenbach having a place of business or manufactory in Vesey street, between Broadway and Church streets, in this city?
A. I have.
247 X. 60. What is your connection with said last-mentioned firm?
A. I object to answer that.
X. 61. Are you a member of said last-mentioned firm of Hermann & Lautenbach?
A. I am.
X. 62. Does not that firm manufacture shirts?
A. Yes, sir.
X. 63. What then do you mean by your answer to cross-question 58?
A. Because the manufacturing business in Vesey street is merely carried on in our name by another party, and we sell the goods.
X. 64. Do you not furnish to that other party the material to be manufactured by him for you?
A. No, sir.
X. 65. Have you ever furnished any materal, suitable for manufacture into puffing, to one Spielman, of Hoboken, New Jersey?
A. No, sir.
X. 66. Have you ever purchased any puffing from said Speilman?
A. I have.
X. 67. Have you ever sold him any material suitable for making puffing, such as you say you purchased from him?
A. Not that I am aware of.
X. 68. Have you had any conversation with said Speilman in reference to your purchasing puffing from him?
A. I have. The conversation was merely to send puffing when ordered, at same prices as paid to M'r Werner.
X. 69. Where was M'r Speilman's place of business at that time?
A. I cannot tell; never been there.
248 X. 70. Have you never heard where his place of business was; was it not at 108 Chamber' street in this city?
A. I never heard, and never asked.
X. 71. Did you ever send him any orders for puffing?
A. Never; he called for them.
X. 72. State the conversation between you and M'r Speilman referred to in question 68?
A. Same answer as to question 68, after the words "I have."
X. 73. Did M'r Speilman ever tell you that he had bought any machine for making puffing from M'r Werner?
A. He did.
(Question and answer objected to as hearsay evidence.)
X. 74. Did M'r Werner ever tell you that he had sold or transferred any machine for making puffing to M'r Speilman?
(Objected to on the ground that its relevancy does not appear, and upon the ground that it does not have any bearing upon the issues in these causes in its present shape, and the defendants' counsel asks the complainant's counsel what his object is for asking this question.)
A. I do not recollect.

X. 75. Have you no recollection whatever of M'r Werner speaking to you about his selling a machine for making puffing?

A. I have not.

X. 76. Did M'r Werner ever offer you a machine for making puffing?

A. Never.

Further examination of this witness adjourned until Wednes-
249 day, Nov. 6th, 1872, at 11 a. m., on account of the intended absence of the witness.

Adjourned until 28th inst., at 11 a. m.

MONDAY, *October 28th*, 1872.

Present, counsel as before.

CAROLINE WEITLING, being duly sworn as a witness on part of defendants, deposes and says:

Q. 1. What is your name, age, residence, and occupation?

A. Caroline Weitling, forty years of age, residence 360 Grand street, New York City, occupation vest-making.

Q. 2. Are you well acquainted with what are known as flutings, puffings, and crimpings, and have you ever made them? If you have, state how long ago, as near as you can recollect.

A. I am well acquainted with them. I made them for patterns, experimental, about between seventeen and eighteen years ago.

Q. 3. Are you the widow of the late William Weitling?

A. Yes.

Q. 4. Did your husband invent a machine for making crimping, fluting, and puffing, or all of them?

(Objected to as irrelevant.)

A. Yes, sir.

Q. 5. Please state how long ago he invented that machine, (about)?

(Same objection.)

250 A. Seventeen years ago.

Q. 6. Could said machine make fluting, crimping, and puffing?

(Same objection.)

A. Yes, sir.

Q. 7. Did your husband, the late William Weitling, ever make crimping and fluting and puffing on or with the machine he invented, and of which you have spoken above?

(Same objection.)

A. He made it by experimental and sample.

Q. 8. Please describe the kind of fluting or puffing, or both, and the kind of crimping he made with said machine, as near as you can.

(Same objection.)

A I can't say, but I can show samples of crimping.

Q. 9. Can you show samples of fluting?

(Same objection.)

A. I can show how it is to be made on a machine.

Q. 10. What machine do you speak of when you say "on a machine"?

(Same objection.)

A. The machine my husband invented.

Q. 11. Can you show how puffing is made on a machine?

(Same objection.)

A. Yes, sir.

251 Q. 12. On what machine can you show how puffing is made?

(Same objection.)

A. On that machine which my husband invented.

Q. 13. Did your late husband make fluting or puffing and crimping, or all of them, with the machine you have mentioned?

(Same objection, and also on the ground that the question is leading.)

A. Yes, by experiments.

Q. 14. As the counsel for the complainant has objected to the last question as a leading one, I will ask you now to state with what machine your late husband made all the articles mentioned in the last question.

(Last objection continued.)

A. With the same machine he invented.

Q. 15. Please state how he made these articles above mentioned.

(Objected to as irrelevant, and because the witness has not been shown to have any knowledge on the subject—that is, how her late husband made such articles.)

A. I can show how it was made by machine. I can show it by those kinds of crimpings.

Q. 16. How long ago has it been since your husband first made puffings and flutings and crimpings on a machine?

(Objected to as irrelevant.)

252 A. About seventeen years.

Q. 17. Was that machine, or was it not, invented by your late husband?

(Same objection.)

A. It was; the same machine.

(Answer objected to as irresponsive.)

Q. 18. The same machine invented by your husband or not?

(Objected to as irrelevant and leading.)

A. The same machine.

Q. 19. State whether or not your husband was successful in making fluting and puffing and crimping on any machine; and if so, state when he was successful.

(Objected to as irrelevant.)

A. From time to time. I do not understand the meaning of the word "successful."

Q. 20. In answer to question No. 7 you were asked, "Did your husband ever make crimping, puffing, or fluting on or with a machine he invented?" to which you answered, "He made it by experimental and sample." I will now ask you if he succeeded in his experiments in making these articles.

(Same objection.)

A. He did.

Q. 21. Did or did not any other person besides your husband make puffings or flutings, or both, and crimping on that machine? If so, state who.

253 (Objected to as irrelevant, and also on the ground that the witness is asked to testify generally, and is not limited to the persons named in the answers herein as having made, used, or sold the article patented in exhibit re-issue 3001 and the machine patented in exhibit reissue 3000.)

A. Yes; my sister and me.

Q. 22. Please state when the persons you have mentioned in your answer above, first made those articles mentioned in your answer above, as near as you can recollect.

(Objected to as irrelevant.)

A. I made it about seventeen years ago for sample, from time to time, I and my sister.

Q. 23. Would or not any of the puffings made on that machine stretch cross-wise or laterally as well as lengthwise?

(Objected to as irrelevant and leading, and the witness is cautioned not to answer the question unless she fully understands it.)

A. I understand the question. It will.

Q. 24. Did you make puffings or flutings on that machine, as trimming, for articles of dress, or for what use did you make those articles?

(Last objection continued.)

A. I made it for samples; for experiment.

Q. 25. Did you or not ever use any trimming of the kind asked about in the above question for articles of dress or wear?

(Objected to as irrelevant, leading, and as having been asked in the last question and answered by the witness.)

254 A. Yes; for my own.

(Defendants' counsel offers as an exhibit an article of fluted puffing, which is marked "Exhibit, Weitling Puffing, Oct. 28th, 1872. R. E. S., Ex."

Defendants' counsel stated that he does not now offer said exhibit in evidence.)

Q. 26. Look at the article marked "Exhibit, Weitling Puffing," and state whether you ever saw that article before, and, if you answer yes, state how long since you first saw it.

(Same objection.)

A. I saw such kind of puffing before. I first saw it some years ago, but I cannot tell how long ago.

Q. 27. State as near as you can recollect how long ago when you first saw it.

(Same objection as to question 25.)

A. It may be 5 or 6 years ago, or it may be longer.

Q. 28. Did you know who made the article marked "Exhibit, Weitling Puffing"?

A. Yes; I made the "Exhibit, Weitling Puffing."

Q. 29. State whether or not you ever made any more of the same kind of puffing.

(Objected to as irrelevant.)

A. Yes; I did.

Q. 30. State whether or not any other persons made puffing of that kind?

(Same objection as to question 21.)

255 A. Yes, my sister and my husband.

Q. 31. State how many years ago your husband and your sister made that kind of puffing.

(Objected to as irrelevant.)

A. Seventeen years, and afterwards from time to time, for samples and experiments.

Q. 32. Please state the name of your sister who made that kind of puffing seventeen years ago.

(Same objection.)

A. Johanna Toedt.

Q. 33. State whether or not you have ever worn or used the article marked "Exhibit A, Weitling Puffing," and, if so, state how long ago.

(Same objection.)

A. Since seventeen years, I have used something like it.

Q. 34. Question repeated; as you do not seem to have understood my last question fully, I repeat it for the purpose of getting a more detailed answer to the question.

(Same objection continued; also objected to on the ground that the witness has answered the question now repeated.)

A. Yes, I used this about 8 or 9 years ago.

Q. 35. Please state whether or not this article, which you say you have worn, has or has not been more or less defaced by being used so long.

(Objected to as irrelevant.)

A. Yes, it is stretched out much.

256 (Defendants' counsel offers in evidence the article marked "Exhibit A, Weitling Puffing," and also offers, as an exhibit, two articles of puffing, which are marked "Exhibit A, Weilting Puffing No. 2, Oct. 28th, 1872. R. E. S., Ex." Complainant's counsel objects to the admission of the "Exhibit Weitling Puffing" in evidence on the ground that there is no proof showing, or tending to show, the existence of said exhibit more than five or six years ago, but is a recent production.)

Q. 36. Look at the two specimens of fluted puffing marked "Exhibit, Weitling Puffing No. 2," and state whether you ever saw those specimens before, and whether you know who made them.

(Objected to as irrelevant.)

A. I saw them before, and my husband made them.

Q. 37. State how he made them.

(Same objection.)

A. He made them by the machine which he invented.

Q. 38. State how long ago, as near as you can recollect, he made puffings like these, "Exhibit, Weitling Puffing No. 2?"

(Same objection.)

A. Since fifteen years ago, from time to time.

Q. 39. State whether any other persons made puffings like these, "Exhibit, Weitling Puffing No. 2," and, if so, name the persons.

(Same objection as to question 21.)

A. My sister Johanna Toedt.

257 Q. 40. Did you or not make any?

(Objected to as irrelevant.)

A. Yes.

Q. 41. State, if you recollect, about how many years ago your sister and yourself made puffings like these.

(Same objection.)

A. Since fifteen or sixteen years ago, making them from time to time.

Q. 42. Look at "Exhibit, Weitling Puffing," and state whether or not, when that was first made it had or did not have a full and puffed centre inside of the fluted or crimped borders.

(Objected to as irrelevant and leading.)

A. Yes, it was full puffed when it was first made, but it is stretched out from it being worn in a hat for myself; I wore it out in the rain.

Q. 43. Please look at the centre part of "Exhibit, Weitling Puffing," and the centre part of "Exhibit, Weitling Puffing No. 2," and state whether or not the centre part of each have any resemblance to each other when they were first made.

A. "Exhibit, Weitling Puffing," was just so tight and full as "Exhibit, Weitling Puffing No. 2," as regards the centre part of each.

Q. 44. State what you mean by the words "so tight and full."

A. I mean "Exhibit Weitling Puffing" looked like "Exhibit Weitling Puffing No. 2" when it was first made.

(Defendant's counsel offer as an exhibit, not as evidence, a machine which is marked "Exhibit, Weitling Machine. Oct. 28th, 1872.

258 R. E. S., Ex.;" also two rollers with rings thereon, which are marked "Exhibit, Weitling Rollers, Oct. 28th, 1872. R. E. S.,

Ex.;" also some loose rings which are marked "Exhibit, Weitling Rings, Oct. 28th, 1872. R. E. S., Ex.")

Q. 45. Please look at the Exhibits "Weitling Machine," "Weitling Rollers," and "Weitling Rings," and state whether you ever saw them before, and whether you know who invented and made them, and whether you know when they were invented and made, and, if so, state when and by whom they were invented and made.

(Objected to as irrelevant.)

A. I have seen them before; my husband invented them, and they were made by a man in our house, 126 Allen street, by the name of Miller, in 1855.

(Defendants' counsel now offers in evidence the said exhibit.

Complainant's counsel objects to the reception of the same as irrelevant.)

Q. 46. State whether you know if any person or persons used those exhibits, and, if so, when and for what purpose.

(Same objection to question 21.)

A. Yes; my husband, my sister, and myself; about 15 or 16 years ago, and since from time to time. I mean by my husband, William Weitling. We used them for making patterns and experiments.

Q. 47. What kind of pattern and experiments do you mean?

259 A. Every kind that we could make on that machine, crimping, fluting, and puffing.

Q. 48. Did you make many or several varieties or kinds of fluting, puffing, and crimping on the said machine?

(Objected to as irrelevant.)

A. Yes.

Q. 49. Did you or not have to change the rings in making these different patterns?

A. Yes.

Q. 50. State whether or not the machine was used as it now appears.

A. Yes.

Q. 51. State who used the machine as it now appears, and how long ago.

A. 15 or 16 years ago my husband, William Weitling, my sister and myself used the machine as it now appears.

Q. 52. State whether or not when your husband, your sister, and yourself used the machine as it now appears it made fluting or puffing or fluted-puffing, and, if so, what kind or what pattern?

(Objected to as irrelevant.)

A. It made puffing like "Exhibit, Weitling Puffing No. 2."

Adjourned to 30th inst. at 11 a. m.

WEDNESDAY, *Oct.* 30, 1872.

Present, counsel as before.

JOHANNA TOEDT, being duly sworn as a witness on part of defendants, deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

260 A. Johanna Toedt; 31 years of age; residence, 360 Grand street, New York City; occupation, vest-making.

Q. 2. Please state whether or not you are acquainted with trimming, consisting of puffings, flutings, and crimpings; and, if so, please state how long you have been acquainted with such things.

A. I am; and have been acquainted with them 16 or 17 years.

Q. 3. Have you ever made any of them? and, if so, state which of them.

A. I have made puffing, fluting, and crimping.

Q. 4. Please state how long ago you first made them, and whether you have continued to make them since or not.

A. I made them about sixteen or seventeen years ago, and have continued to make them since.

Q. 5. Were you acquainted with William Weitling, deceased? and, if so, state how long you knew him.

A. I was; about eighteen years.

Q. 6. Do you know whether or not that William Weitling invented a machine for any purpose? and, if so, state how long ago and what was the nature of that invention, and what would it do?

(Objected to as irrelevant.)

A. William Weitling invented a machine seventeen years ago for making fluting, puffing, and crimping, and it would make fluting, puffing, and crimping.

Q. 7. Would you know that machine if you saw it now?

A. Yes, sir; I would.

Q. 8. Look at "Exhibit, Weitling Machine," "Weitling Rollers," and "Weitling Rings," and state whether or not you recognize that machine, those rings, and those rollers.

A. Yes, sir; I do.

261 Q. 9. If you know who invented them, state it.

A. Yes, sir; William Weitling.

Q. 10. Was that the machine that you mentioned in answer to question 6?

A. Yes, sir.

Q. 11. Did you or not ever know any person or persons to make puffing or fluting or crimping, or all of those articles on that machine? If so, mention their names.

(Objected to on the ground that the question is irrelevant, so far as it inquires about the making of any article, except the article patented in Exhibit, Re-issue 3001, and that the witness cannot be asked as to any making of the articles mentioned by any person except those named in the answers herein; and that the question should be restricted to such persons.)

A. I have seen M'r Weitling, M'r's Weitling, and myself.

Q. 12. Make all of those articles, puffing, fluting, and crimping?

A. Yes, sir.

Q. 13. Please state how long ago, as well as you can recollect, you saw those persons make puffing, fluting, and crimping on that machine.

(Objected to as irrelevant.)

A. I have seen ever since seventeen years, from time to time.

Q. 14. What do you mean when you say "you have seen ever since seventeen years, from time to time?"

A. I have seen them make crimping, puffing, and fluting.

262 Q. 15. If you were to see any samples of puffing or fluting or crimping as made on that machine, would you recognize them?

(Objected to as irrelevant.)

A. Yes, sir.

Q. 16. Please look at "Exhibit, Weitling Puffing, Oct. 28th, 1871," and state whether or not you know how that was made; and, if so, state how it was made; and if you know about what time it was made please state that also.

(Same objection.)

A. I know how that was made—it was puffed on William Weitling's machine—it was made in 1855.

Q. 17. State whether you have ever seen that article worn by any one as an article of dress; and, if so, state by whom.

(Same objection as to question 11.)

A. Yes, sir; I have. I have seen my sister wear it on a hat.

Q. 18. State about how long, as near as you can recollect, she wore it on her hat.

(Objected to as irrelevant.)

A. She wore it about seven or eight years ago for about two years.

Q. 19. Did you ever see any other like "Exhibit, Weitling Puffing?"

A. Yes, sir.

Q. 20. When did you see it, and who had it?

(Same objection as to question 11.)

A. I had it; I wore it myself on a hat.

Q. 21. When did you wear it on your hat, and for how long?

263 (Objected to as irrelevant.)

A. Seven or eight years ago and I wore it about a year.

Q. 22. How was the piece you wore made, and who made it?

(Same objection.)

A. It was puffed on William Weiting's machine, and Mrs. Weiting and myself made it.

Q. 23. How did it look, or what was its appearance when it was first made?

(Same objection.)

A. It was fluted on the outside and puffed in the centre.

Q. 24. State whether or not it is defaced and stretched a good deal by having been used.

(Same obection.)

A. It is stretched by wearing it out in the rain.

Q. 25. Please look at "Exhibit, Wietling Puffing No. 2," and state whether you ever saw any puffing like that before.

(Same objection.)

A. Yes, sir; I have.

Q. 26. State as near as you can recollect about how long ago you first saw puffing like that.

(Same objection.)

A. I seen that about ten or eleven years ago.

Q. 27. Where did you see it about ten or eleven years ago?

264 (Objected to on the ground that the witness cannot testify as to having seen puffing, except in localities mentioned in the answers, and that the question is therefore too general.)

A. In New York City.

Q. 28. Do you know whether or not any person or persons made an article like this "Exhibit, Weiting Puffing No. 2?" and, if so, state their names.

(Objected to as irrelevant and that the witness cannot testify as to any person or persons having made the article referred to except those persons named in the answers herein, and the question is therefore too general.)

A. M'r Weitling, M'r's Weitling, and myself made it.

Q. 29. How long ago, about, as near as you can recollect, did M'r Weitling, M'r's Weitling, and yourself make articles like "Exhibit, Weitling's Puffing No. 2?"

(Objected to as irrelevant.)

A. It is about eleven or twelve years ago.

Q. 30. How did M'r Weitling, M'r's Weitling, and yourself make the articles like "Exhibit, Weitling Puffing No. 2?"

(Same objection.)

A. We puffed it in the machine.

Q. 31. What machine?

(Same objection.)

A. William Weitling's machine, "Exhibit, Weitling Machine."

265 Q. 32. Did you use that machine a good deal from time to time?

(Same objection.)

A. Yes, we did.

Q. 33. Did any person outside of the family see the articles that you made on that machine?

(Same objection.)

A. Yes, sir.

Q. 34. Who did you live with at the time this machine was invented by William Weitling?

(Same objection.)

A. At the time it was made, at home, at Poland, Herkimer County, N. Y.; that was in the spring of 1855; in the fall of 1855 I came to New York City, and lived ever since with M'r and M'rs Weitling.

Q. 35. Do you know whether or not Mr. Weitling was anxious to make his machine succeed in being useful or not?

(Same objection.)

A. Yes, sir.

Q. 36. Do you know whether he worked on it a good deal? If so, state.

(Same objection.)

A. He worked on it very often.

Q. 37. Did he exhibit samples of his manufacture on that machine to any person?

(Same objection.)

266 A. Yes, sir.

Q. 38. Often, or how did he exhibit them?

(Same objection.)

A. He showed it to a good many strangers and friends.

Q. 39. Did he or not exhibit such samples as these, "Exhibit, Weitling Puffing" and "Exhibit, Weitling Puffing No. 2?"

(Same objection.)

A. Yes, sir.

Q. 40. Did he exhibit such samples as "Exhibit, Weitling Puffing" and "Weitling Puffing No. 2," often?

(Same objection.)

A. Yes, sir.

Q. 41. To whom did he exhibit it?

(Objected to as irrelevant and on the ground that the witness cannot be asked as to any exhibition of the puffing to persons not named in the answers herein.)

A. He exhibited it to M'r Auferman, M'r Kerbel, and M'r Werner saw it, and a great many others.

Q. 42. How far back, in what year, can you remember that M'r Weitling showed such articles as "Exhibit, Weitling Puffing No. 2?"

(Objected to as irrelevant.)

A. 1863.

Q. 43. How long can you remember persons calling on M'r Weitling to look at the machine marked "Exhibit Weitling?"

267 (Same objection.)

A. That was seven years ago.

Q. 44. Do you know why they called to see M'r Weitling? and, if so, state why they called to see him about that machine.

(Same objection.)

A. He had an advertisement in the paper—he was trying to get a partner—a man to go along with him and do business with him.

Q. 45. Did or did not many persons call, and when they called did they examine the machine?

(Same objection.)

A. Yes; a good many persons called and examined the machine.

Q. 46. Do you know whether or not he sent a machine of his invention to London, England, and, if so, can you recollect about what time?

(Same objection.)

A. He told me that he sent a machine to England, but it was a few months before I came to New York.

(Complainant's counsel objects to the answer as hearsay.)

Q. 47. About what time did you hear him say that he sent a machine to England, and was it family-talk about that time?

(Objected to as inquiring as to what the witness heard.)

268 A. I heard him say it when I came from the country; that was in October, 1855; it was family-talk about that time.

Q. 48. Do you know or did you ever hear who took that machine to England?

(Objected to as irrelevant, and the latter part of the question especially, as calling for what the witness heard.)

A. Yes, sir; M'r Sully took it along; I heard M'r and M'r's Weitling say so, and saw the agreement.

Q. 49. What agreement do you speak of?

(Objected to as irrelevant.)

A. The agreement between M'r Sully and M'r Weitling.

Q. 50. Do you remember what that agreement was?

(Objected to on the ground that it appears by the answer of the witness to question 48 that the agreement referred to is in writing and that therefore it should be produced; and that the witness cannot be inquired of concerning its contents without the absence of the paper being satisfactorily accounted for.)

A. I can't state exactly the contents, but think I can produce the agreement.

Q. 51. Can you adjust or arrange the different rollers of this machine, "Exhibit, Weitling Machine," and the different kinds of rings that belong to it, so as to produce different varieties of work?

(Objected to as irrelevant.)

A. I can do it myself.

269 Q. 52. Did you ever do it?

(Same objection.)

A. Yes, sir.

Q. 53. How long ago can you recollect that you first arranged the different rollers, and also the different rings on the rollers?

(Same objection.)

A. About 14 years ago.

Q. 54. Did you at that time arrange the rings so as to have plain rings in the centre and fluted rings on the outside?

(Objected to as irrelevant and leading.)

A. Yes.

Q. 55. Look at "Exhibit, Weitling Puffing," and say whether or not it would not have been as easy to put the same kind on both sides of that piece as on one side.

(Same objection, and also as unintelligible.)

A. This piece was made before I came to New York, seventeen years ago. Yes, we can just as well put fluting-rings in the centre as not.

(Answer objected to by complainant's counsel as irresponsive.)

Q. 56. Do you know whether, about the time M'r Wetiling advertised, as you have mentioned, for a partner, the advertisement attracted a good deal of attention?

(Objected to as irrelevant.)

270 A. Yes, sir; there were several persons came to see the machine.

Q. 57. What do you mean by "several;" do you mean many or few?

(Same objection.)

A. There was one at a time, but five or six came.

Q. 58. Did they see the machine work and make different kinds of trimmings?

(Same objection.)

A. I saw the men come and go into the room where the machine was, and heard them ask to see the machine.

Q. 59. How long ago was that—about?

(Same objection.)

A. It was about seven years ago.

Q. 60. Do you or not remember when M'r Weitling first saw what is called King's puffing in the stores?

(Objected to as irrelevant and incompetent.)

A. Yes, sir; that's about four years ago.

Q. 61. Do you remember what he said about it then? If so, state what remarks he made about it.

(Objected to as irrelevant, and latter clause of question objected to on the ground that it calls for what the witness was told by M'r Weitling.)

A. He said that he had seen some puffing and he could make just the same on his machine.

271 Q. 62. Did he say that he had made it on his machine, or that he had made like it on his machine? Or state as near as you can what he did say.

(Objected to as leading, and also on the grounds stated in the objection to the last question.)

A. He said that he had made just like it on his machine.

Q. 63. Was M'r Weitling a German, or of what nationality was he?

A. A German.

Q. 64. Are M'r's Weitling and yourself Germans, or of what nationality are you?

A. We are German.

Q. 65. Are there many words in the English language which you can't understand?

A. Yes, sir.

Q. 66. You have never studied in the English grammar, have you?

A. No, sir.

Cross-examined:

X. 67. Are you a sister of Caroline Weitling, the widow of W'm Weitling you have before spoken of?

A. Yes, sir.

X. 68. How long did you live at Poland before you came to this city?

A. Three years.

X. 69. Did you go to live at Poland immediately on your arrival from Germany?

A. Yes, sir.

X. 70. In what year did you arrive from Germany?

A. 1852.

X. 71. How old were you then?

A. I was twelve years old.

X. 72. Did you ever go to school at Poland or in this city?

272 A. No, sir; only two or three months; that was in an English school.

X. 73. Have you been accustomed to speak English here?

A. At home we always speak German; when I go out I speak English.

X. 74. Did your sister come over from Germany at the same time you did?

A. Yes, sir.

X. 75. Where was your sister married to M'r Weitling?

A. In New York City, in 1855.

X. 76. Was the article marked "Exhibit, Weitling Puffing" part of a longer strip of goods?

A. Yes; it was about twelve yards.

(Complainant's counsel objects to the answer after the word "yes" as irresponsive and volunteered by the witness.)

X. 77. Have you the rest of the bonnet to which said 'hibit was formerly attached; or, if not, who has it, if you know?

A. We have it.

X. 78. Whom do you mean by "we" in your last answer?

A. My sister, M'r's Weitling, and myself.

Adjourned to 31st inst. at 11 a. m.

THURSDAY, *Oct.* 31*st*, 1872.

Present, counsel as before.

Continuation of the testimony of Miss Toedt.

X. 79. What ha ve been your occupations during the last seventeen years?

273 A. Vest-making.

X. 80. Have you been engaged in any other occupation whatever during that time?

A. No.

X. 81. Has your sister, M'r's Weitling, been engaged in any occupation other than vest-making during the last seventeen years, so far as you know?

A. Yes, sir.

X. 82. What other occupation has your sister, M'r's Weitling, been engaged in during that time?

A. She has been working on the crimping, fluting, and puffing.

X. 83. What were the occupations of the late William Weitling from 1855 up to the time of his death, so far as you know?

A. First, he was registering-clerk in the Castle Garden, and before that he was editor on the Staats Zeitung; that is all that I know of.

X. 84. Were you living with him all the time from 1855 to the time of his death?

A. Yes, sir.

X. 85. Did you hear of his being engaged during any of that time in any occupation except those you have before mentioned—that is, at the Castle Garden and the Staats Zeitung?

A. I have seen him make crimping, puffing, and fluting.

X. 86. When did you first hear of these suits?

A. A year ago last summer.

X. 87. State how you first heard of these suits.

A. I heard from M'r Werner, now present.

X. 88. How long had you known M'r Werner before he told you of these suits?

A. From 1863.

X. 89. Was the piece of puffing which you have testified you wore on your hat part of the same piece of which the "Exhibit, Weitling Puffing," was taken?

A. Yes, sir.

274 X. 90. Then you and your sister each cut pieces off the same piece of goods and put them on your hats, and the "Exhibit, Weitling Puffing," is a part of the piece your sister put on her hat?

A. Yes, sir.

X. 91. Look at "Exhibit, Weitling Puffing," and say whether or not it is made up of two pieces of goods.

A. Yes, sir; it is from one piece; it was made up of two pieces to make a puff.

X. 92. Was that "Exhibit, Weitling Puffing," sewed together after it was run through the machine, or before?

A. This ribbon was made before I came to New York, and I and my sister sewed it together to make puffing.

X. 93. Did you, yourself, see the ribbon of which that "Exhibit, Weitling Puffing," is made run through the machine at all?

A. No, sir.

X. 94. Then you only know that it was run through the machine from what M'r Weitling or your sister told you?

A. Yes.

X. 95. When you put this "Exhibit, Weitling Puffing," in the bonnet, was it sewed to the bonnet by the so edge, or how was it attached to the bonnet?

A. I don't know, because I didn't put it on.

X. 96. Did you ever see a bonnet with any ribbon like this "Exhibit, Weitling Puffing," on it; and if so, how was such ribbon attached to the bonnet, by being sewed at the edges, or how?

A. I can't tell whether I saw any more than my sister's and mine; I can't tell how it was fastened, because my sister fastened it.

X. 97. On what part of the bonnet was this "Exhibit, Weitling Puffing," attached; on the top, on the side of the crown, on the back, or where?

A. On the top.

275 X. 98. Was it spread out flat, or was it fixed so as to be raised in the middle?

A. It was spread out flat.

Q. 99. Was the top of the bonnet round or flat?

A. The whole of the bonnet was covered with it, and this piece was cut off; the top of the bonnet was flat

Q. 100. The edges of this "Exhibit, Weitling Puffing," are plaited or lapped over each other in a number of places; were those plaits sewed down on each other when the puffing was worn on the bonnet?

A. I don't know.

(The examiner is requested to pin these plaits as now appearing on the exhibit, so that they may not be stretched out of place.

Defendants' counsel states that there is nothing to show that those plaits were made by the machine or accidental.)

X. 101. How do you fix the time when you and your sister wore the bonnets on which were the pieces of puffing cut from the same piece as the "Exhibit, Weitling Puffing?"

A. It's about eight or nine years ago.

X. 102. Is their any circumstance or event which enables you to fix the time when you and your sister wore said bonnets?

A. I know it from one of my sister's little children. She has a little boy six years old going on seven, and we wore it two years before that.

X. 103. What makes you think it was two years? Do you give this from memory, or what?

A. We did not wear it at that time any more because it was old. We wore it for about a year before the child was born, in common and in the rain, and a year before that for good.

276 X. 104. You didn't, then, have anything then to do making these bonnets for yourself and sister?

A. I helped her a little—did not put the trimming on, but saw her put it on.

X. 105. Have you read or heard read the testimony of *with* your sister, M'r's Weitling, in these suits?

A. No.

X. 106. Do you know what I mean by the testimony of M'r's Weitling in these suits?

A. Yes.

X. 107. Have you read or heard read any part of her testimony in these suits?

A. No.

X. 108. Have you had any conversation whatever with M'r Dorsey, the counsel for defendants, as to what you were to testifiy to in these suits?

A. Yes.

X. 109. Did you have a conversation with him yesterday morning in reference to you testifying in these suits?

A. I talked with him, but did not tell him what I was going to attest.

X. 110. When were the particular pieces of goods which are marked "Exhibit, Weitling Puffing, No. 2." made? State if you know.

A. This piece was made in last January, 1872.

X. 111. Who made them?

A. My sister, M'r's Weitling, and myself.

Q. 112. You say puffing like that exhibit was made 10 or 11 years ago. Have you any pieces of those goods which were made 10 or 11 years ago?

A. No, sir.

X. 113. Do you know if any of those goods which were made 10 or 11 years are now to be found?

A. I don't know.

X. 114. When last did you see any of the puffing or trimmings similar to that Exhibit A which were made ten or eleven years ago?

A. I can't say when; I know it was laying around.

277 X. 115. How long was it lying around after it was made ten or eleven years ago?

A. I don't know; it might be a month, or a year, or two years, or it may longer; I can't tell.

X. 116. And you can't tell positively, can you, whether it lay around as long as a year or six months, can you?

A. I can't tell.

X. 117. Did M'r Weitling and M'r's Weitling and yourself all assist in making it ten or eleven years ago?

A. Yes, sir.

X. 118. The trimming "Exhibit A, Weitling, No. 2," was made on the machine marked "Exhibit A, Weitling Machine," as it now is, was it not?

A. Yes.

X. 119. When trimming was made ten or eleven years ago, similar to "Exhibit, Weitling Puffing, No. 2," do you remember exactly how the rings on the machine were placed?

A. I can't remember just exactly.

X. 120. When such trimming was made ten or twelve years by M'r and M'r's Weitling and yourself, how much was made, and for what particular purpose, if any, was it made, or was it only made as an experiment?

A. I can't exactly tell how much was made. It was made for trying to make a business with it to show to get the work in market.

X. 121. Do you know whether M'r Weitling made it for any person in particular?

A. I don't know.

X. 122. Will you please describe how M'r and M'r's Weitling and yourself made that article ten or eleven years ago? Tell us how the cloth was prepared or fixed before it was run through the machine, and how it run through the machine—explain how, all the way, in which it was made, if you can, referring to the "Exhibit A, Weitling Machine," if you desire.

278 A. Sometimes the cloth was starched, sometimes it was wetted or dampened a little; we let it run sometimes from the top to the bottom, and sometimes from the bottom up, just as we liked, between the rollers; and if he had a narrow piece, we let it run over the hand, feeding it by the hand, that is what I worked. I saw some kind of rollers, but I can't describe them, over which it was fed when it was a broad stripe, but we could just as well use it when it was a narrow one.

X. 123. What did M'r Weitling do in making that trimming with M'r's Weitling and yourself?

A. He marked it just as I described in the other answer.

X. 124. What did M'r's Weitling do in helping M'r Weitling and yourself in making that trimming?

A. Just the same.

X. 125. That trimming which you made ten or eleven years ago, was M'r Weitling able to get it on the market and start a business in it?

A. No, sir.

X. 126. When M'r and M'r's Weitling and yourself made such trimmings ten or eleven years ago, who besides you three saw you make it?

A. At that time nobody, as I know of.

X. 127. You say M'r Weitling showed samples of puffing, about 1863, to M'r Auferman and M'r Kerbel and M'r Werner. State if you know where M'r Auferman, M'r Kerbel, and M'r Werner now are.

A. M'r Werner is present, (he is defendant in one of these suits:) I heard that M'r Auferman was in Europe; M'r Kerbel I heard was in New York City. I saw M'r Auferman two or three times, a few months, the same year; I have not seen M'r Kerbel since that time.

X. 128. When did M'r Weitling show these samples to M'r Auferman, Kerbel, and M'r Werner?

A. At M'r Weitling's house, No. 107, avenue A.

X. 129. How are you able to fix the year 1863 when M'r Weitling showed such samples to M'r Auferman, Kerbel, and Werner?

A. Because I know in that M'r Werner made a button-hole machine for M'r Weitling.

279 X. 130. What makes you think it was in the year 1863 that M'r Werner made the button-hole machine?

A. I am sure it was in 1863, and I can state it by papers and agreements he had at that time with M'r Aufermann and M'r Werner.

X. 131. M'r Weitling is not living, I believe. When did he die?

A. He died on the 25th day of January, 1874.

X. 132. In what paper did M'r Weitling put the advertisement you speak of, and when was that?

A. I don't know what paper it was in. It was seven years ago.

X. 133. You say five or six persons called to see M'r Weitling in answer to that advertisement. Can you give the names of any of those who so called to see him?

A. No, sir.

X. 134. Do you know where any such persons lived?

A. No, sir.

X. 135. You say those persons went into the room where the machine was, and you heard them ask to see it. Did you go into the room with them?

A. No, sir.

X. 136. When M'r Dorsey spoke to you yesterday morning did he not show your the testimony of your sister, M'r's Weitling, or a copy of it?

A. I saw something in which her name was in, but I didn't read it over.

X. 137. Did not M'r Dorsay read a part of it to you?

A. Well, a little.

X. 138. Do you remember what that part was?

A. No, sir.

X. 139. But he read a part of your sister's testimony to you, did he?

A. Yes.

X. 140. You have not had any promise made as to your being paid for testifying in these suits, have you?

A. No, sir.

X. 141. Have you been subpœn'ed as a witness to appear here to-day to give your testimony?

280 A. I didn't get anything.

X. 142. At whose request have you come here to-day?

A. You asked me yesterday to come here to-day.

X. 143. Were you subpœn'ed as a witness to appear here yesterday to give your testimony?

A. No, sir.

X. 144. At whose request did you come here yesterday to give testimony?

A. M'r's Weitling's.

X. 145. State the conversation you have had with M'r Dorsey in reference to what you could testify to in these suits.

A. I hadn't hardly any; only a few minutes.

X. 146. Were you ever at M'r Dorsey's office, No. 6 Wall street, in this city?

A. Once.

X. 147. State what passed at that time at his office.

A. I gave my affidavit there.

X. 148. Was your affidavits written out before you went to his office, or was it written in your presence?

A. It was written in my presence.

X. 149. Did you tell him what you would swear to, or did he ask you questions?

A. M'r Dorsey ask' me questions.

X. 150. Did he, on that occasion, ask you if M'r Weitling had ever sold any puffing or fluting?

A. No, sir.

X. 152. Did you read the affidavits which you then to before you signed and swore to it?

A. M'r Dorsey read it to me.

X. 153. How often did M'r Dorsey read that affidavit over to you before you signed and swore to it?

A. I don't remember whether he read it over once or twice.

X. 154. Please state the contents of the affidavit, as well as you can.

A. I could not say that.

281 X. 155. Do you mean to say that you don't remember what you then swore to?

A. I remember what I swore, but I can't say it. If I hear it, I know everything; but I can't say it out.

X. 156. Do you remember about what time you made the affidavit you have just been speaking of?

A. It was in April, 1872.

X. 157. How do you remember that it was in April, 1872?

A. I can remember it—we moved to 360 Grand street, and I know it was the first month that we lived there.

X. 158. Have you seen that affidavit, or any copy of it, since you swore to it?

A. Yes, sir.

X. 159. When did you last see that affidavit, or copy of it?

A. Seen it yesterday.

X. 160. Where did you see it?

A. I have seen it in M'r Dorsey's hands.

X. 161. Was what you then saw the original affidavit that you swore to, or a copy of it?

A. It was a copy.

X. 162. Did you read over that copy of your affidavit which M'r Dorsey showed you yesterday?

A. Yes, sir.

X. 163. Did he then ask you whether or not you could swear now to all that was stated in the affidavit?

A. No, sir.

X. 164. What did he say to you yesterday when he showed you that copy affidavit?

A. He didn't say anything especially to me about it.

X. 165. Didn't he say anything whatever to you about it?

A. No, sir.

X. 166. Did you say anything to him when he showed you that copy affidavit?

282 A. No, sir.

X. 167. You say, then, that all that was said or done between you and M'r Dorsey yesterday, in reference to that copy of affidavit, was that he showed it to you, without a word of explanation, and that you did not say anything to him either about it?

A. Yes.

X. 168. Has your sister, M'r's Weitling, any son over 15 years old?

A. Yes, sir. The oldest one will be seventeen on the 7th day of November. His name is William Wangansky Weitling.

X. 169. What is his occupation?

A. He is in the India Rubber Comb Co.

X. 170. How long has he been with said co.?

A. It will be 3 years in December.

X. 171. Do you know one *of* David N. Ropes?

A. I know a man by the name of Ropes, but I don't know his first name.

X. 172. Is he an officer of said company, so far as you know?

A. Yes, sir; as far as I know.

X. 173. Has he ever spoken to you or your sister, M'r's Weitling, about what you should testify to in there suits?

A. He hasn't spoken to me, and what he has spoken to my sister I don't know.

X. 174. Has your sister, M'r's Weitling, ever spoken to you about what you should testify to in these suit'?

A. She has spoken to me about it, but she has not told me what I should testify.

X. 175. What has she said to you about these suits?

A. I hardly know how to answer that question. Of course, we talked about these suits; that is all I want to say. Of course, when we were together we talked about the case, about the machine, about the work; nothing else.

283 X. 176. Did you' sister never repeat to you anything that M'r Werner had told her about these suits?

A. Well, she told me—we talked over several things. Anything that M'r Werner told my sister I heard myself.

X. 177. What did you ever hear M'r Werner tell your sister about these suits, in reference to your sister deriving any advantage from testifying in these suits?

A. I heard M'r Werner, when he came to our house, ask for the crimping, fluting, and puffing machine that he seen in 1863, in 107 avenue A; that's all.

Adjourned to November 1st, at 10.30 a. m.

FRIDAY, *November 1st*, 1872.

Present, counsel as before.

Continuation of the testimony of Miss Toedt.

X. 178. When you first saw the piece of ribbon out of which the "Exhibit, Weitling Puffing" was made, what was the condition of that piece of ribbon? I mean what was its appearance?

A. It was fluted on one side and full on the other side.

X. 179. Do you know what a ruffle is? If so, say what you think is meant by the word.

A. I know what a ruffle is. A ruffle is gathered, as I have seen it, on one side with a thread.

Q. 180. Was there any row of stitching in the ribbon spoken of in question 178 when you first saw it?

A. No.

Q. 181. Did that ribbon appear to have ever been sewed in any way when you first saw it?

A. No.

X. 182. How wide did that ribbon appear to be when you first saw it?

A. It was just about half the width of the "Exhibit, Weitling Puffing."

284 X. 183. Have you had any conversation with your sister, M'r's Weitling, about these suits, or the testimony she or you have given in these suits, since you left this building yesterday afternoon?

A. Why, of course, we talked over things.

X. 184. Did you then say anything to her about the "Exhibit, Weitling Puffing?"

A. Not exactly about that piece.

X. 185. Did you then say anything to her about the questions that were asked you yesterday about the bonnets which you testified to yesterday and the day before.

A. I told her I was asked on what part of the bonnet that piece was, and she said we can then show the bonnet just as it was before the piece was cut out.

(Complainant's counsel objects to the latter part of this answer, commencing at the words "and she said," as not called for by the question.)

X. 186. Has M'r Dorsey or M'r Werner spoken to you yesterday or today about when you first heard of these suits?

A. No, sir.

(Complainant's counsel asks the examiner to mark for identification the affidavit of the witness sworn to April 24th, 1872, and the same is marked "Toedt, Affidavit, Nov. 1st, 1872, R. E. S., Ex.")

X. 187. Look at the paper marked "Toedt, Affidavit, Nov. 1st, 1872," and say whether the signature thereto is in your own handwriting?

A. Yes.

X. 188. Did you ever swear to that paper?

A. Yes.

285 X. 189. Were the samples of trimming now annexed to that paper, "Toedt Affidavit," attached thereto at the time you swore to that affidavit?

A. Yes.

X. 190. How were they then attached to that affidavit? I mean the samples above spoken of.

A. I saw M'r Dorsey put it on, but I can't tell how he done it.

X. 191. Can you read writing in the English language?

A. If it is plain I can read it.

Redirect:

(Defendant's counsel offers in evidence the paper marked "Toedt, Affidavit, Nov. 1st, 1872, R. E. S., Ex.," on the ground that complainant's counsel in his cross-examination interrogated the witness as to the execution of the said affidavit by her, and as to the exhibits thereto annexed, and as to other matters contained in said affidavit; and has thereby made it admissable evidence in the case.

Complainant's counsel objects to the admission of the said "Toedt Affidavit" in evidence, on the ground that it is not competent evidence for the defendants as to any matter therein contained.

Defendant's counsel offers in evidence the samples marked "A" & "B," annexed to said "Toedt Affidavit," upon which the examiner now marks his initial and the present date.

Complainant's counsel objects to the introduction of said samples in evidence, on the ground that they are irrelevant, and not admis-

286 sable on redirect examination.

Defendant's counsel says that the grounds on which he offers those samples are, that complainant's counsel has identified them by this

witness as the puffing made on the machine invented by William Weitling and as puffing made by the complainant, respectively, as mentioned in said affidavit.)

Q. 192. You were asked by complainant's counsel, when you first heard of these suits, in which you are giving your evidence, and you answered, "A year ago last summer." Please take time now to recollect as well as you can the time and state whether it might or might not have been since that time you first heard of these suits.

(Objected to as inadmissable on redirect examination and as leading.)

A. I think it was in the first part of the fall, because it was quite cold already.

Q. 193. You are asked by the complainant's counsel, in question 107, "Have you read or heard read any part of your sister's testimony in these suits?" To which you answered "No." You were then asked, in question 137, "Did not M'r Dorsey read a part of it to you?" To which you answered, "Well, a little." Please state how you understood the question 107, to which you answer "No."

A. I understood it whether I read it, or heard any one read it to me, and I said, "No." I saw M'r Dorsey have a paper in his hand, and I heard him read something out of it, which I took to be M'r's Weitling's testimony.

Q. 194. State whether or not you were sure that it was M'r's Weitling's testimony, or whether it might not have been something else.

A. I was not sure that it was M'r's Weitling's testimony.

287 Q. 195. Have you ever been examined as a witness in any case before?

(Objected to as improper on redirect examination.)

A. No, sir.

Recross:

X. 196. What reason, if any, had you to think that the paper from which M'r Dorsey was reading to you yesterday morning, as you have before testified, was the testimony of your sister, M'r's Weitling?

A. It was not yesterday; it was the day before yesterday. I saw him have several papers in his hand when he was sitting near to me, and I heard him read some of them, and I don't know what they were.

X. 197. Did you suppose that M'r Dorsey was then reading from your sister's testimony?

(Objected to as irrelevant and as immaterial, the supposition of the witness being inconsequential in this matter as evidence.)

A. I don't know.

X. 198. Question repeated.

A. I can't tell what made me think so.

X. 199. But you did think that he was then reading from your sister's testimony, did you?

(Objected to, as the witness has not said that she thought M'r Dorsay was reading from her sister's testimony, and it assumes that to have been said which was not said by the witness, and on the ground that it is immaterial and irrelevant.)

A. I heard him read something, but I don't know what he read.

288 X. 200. Question repeated.

(Objected to, on the ground that it is irrelevant and immaterial, and that it has been answered as well as the witness knows how to answer it.)

A. I don't know how to answer that question.

JOHANNA TOEDT.

Subscribed and sworn to before me this 1st day of November, 1872.
R. E. STILWELL,
Examiner, &c.

Johanna Toedt recalled.

Redirect:

Q. 201. In the answer last given by you you state, "I don't know how to answer that question." State what you mean by that answer as fully as you can.

(Objected to by complainant's counsel as improper at this stage of the testimony, and as leading. The complainant's counsel states that since the examination of the witness closed, as appears above, the defendant's counsel suggested to the witness an answer to this question.

Defendant's counsel states that the witness voluntarily made an explanation of what she meant by her last answer, and the defendant's counsel stated to her that it was proper for her to make that explanation a part of her testimony.)

A. Because I don't know, and I don't recollect; and because I did not hear it well enough.

289 JOHANNA TOEDT.

Subscribed and sworn to before me this 1st day of November, 1872.
R. E. STILLWELL,
Examiner, &c.

ROBERT A. WERNER, being duly sworn as a witness on part of defendants, deposes and says:

Q. 1. What is your name, age, residence, and occupation?

A. Robert Werner; age, 58 years; residence, Hoboken, New Jersey; I am a manufacturer of trimmings.

Q. 2. State whether or not you understand the machine described in "Exhibit, Re-issue 3000;" and whether you are acquainted with the character of the puffing described in "Exhibit, Re-issue 3001;" and whether you understand how that article is made; and whether you understand the machine put in evidence in these cases, and marked "Exhibit, Werner Machine;" and whether you are acquainted with the articles of trimming put in evidence in these cases, and marked "Exhibit, Hermann & Lautenbach," and "Exhibit, Alex. Lyle," respectively; and whether you understand the machine put in evidence in this case and marked "Exhibit, Weitling Machine;" and whether you understand the puffing put in evidence in these cases, marked "Weitling Puffing, No. 2;" and whether you know how said puffing marked "Weitling Puffing" and "Weitling Puffing, No. 2," are made.

A. I understand the machine described in "Exhibit, Re-issue 3000," and I am acquainted with the character of the puffing described in "Exhibit, Re-issue 3001," and I understand how it is made; and I understand the machine "Exhibit, Werner Machine;" I am acquainted with the articles of trimming marked "Exhibit, Hermann & Lautenbach," and "Alexander Lyle." I understand the machine marked "Exhibit, Weitling Machine," I understand the puffing marked "Weitling
290 Puffing," and "Weitling Puffing, No. 2," and I know how they are made.

Q. 3. Please describe the different machines, respectively mentioned in the foregoing question and your answer thereto, so far as may be necessary to intelligently define and describe in detail all the differ-

ences that may exist between them respectively, if there are any differences between them, in your opinion.

A. I understand the machine described in "Exhibit, Re-issue 3000," contains fluting-rollers mounted into a frame, one over the other, so that they can't be moved, one without the other; both moving around—around its axes; the fluting-meshes of the rollers fitting one in the other; the rollers are turned out in flat spaces, and breakers or presses work in loosely in said spaces and are held by set-screws in their places. In front of the fluting-rollers is a guide with arched portions, with a cover over those arched portions, so that it makes a small opening to pass the woven stuff or goods; the fluting-rollers have opposite those arched guides plain spaces; the one on the left-hand side is a little smaller than the one on the right-hand side.

The machine marked "Exhibit, Werner Machine," contains two fluting-rollers mounted into a frame one above the other, so that they can't be moved one without the other, with fluting-meshes fitting in each other of the rollers; those rollers have flat spaces in which breakers or pressers work in loosely, held in their places by set-screws; behind, opposite the breakers or pressers, are scrapers or clearers; those breakers or pressers have protuberances, which cover the fluting-meshes on the lower roller; in the front of the fluting-rollers is fixed, by thumb-screws on two brackets, a flat plate, which has oblong holes or slats, so that this plate can be moved out and in towards and from the fluting-rollers; to that plate is fastened a round straight bar, bended at
291 each end, and these ends are fastened to the plate; the top of the bar being about an inch and three-eighths above the face of the plate. Between this bar and the fluting-rollers is a flat bar about an inch wide, supported by two little stands projecting from the plate, and this flat bar is fastened to these two stands by two keys, these being in the flat bar; two holes are at each end, through which the stands project, and there being in the stands above the flat bar small holes through which the keys pass to keep the flat bar down in its place, so as to leave a space between the flat bar and the face of the plate of about nine-sixteenths of an inch. This space between the flat bar and the face of the plate is for the goods to pass through. The goods, after passing over the straight bar, pass under the flat bar. On the flat bar is fastened an arm by a screw; on the end of the arm is a set-screw; between the arm and the flat bar is a spring, which is kept in its place by the same screw which holds the arm to the flat bar, that projects out to the edge of the plate towards the rollers. The fluting-rollers opposite this arm and spring have each a plain space.

Behind the fluting-rollers is fastened a cross-bar, to which are attached the aforesaid scrapers or cleaners, and to which cross-bar is also attached a thin brass instrument, which I call a raiser. The point of the raiser does not project further on the lower roller than the ends or points of the protuberances in the working machine, but in the "Exhibit, Werner Machine," this raiser projects still further and a little too far.

The "Exhibit, Weitling Machine," has two hollow spindles or rollers mounted in a frame, one opposite the other on a horizontal plane, projecting out from the frame a certain length, about three inches.

On the ends of those projections are screws upon which female
292 screws or caps are fitted. On each spindle next to and just outside of the frame is a shoulder, and between the shoulders and caps are rings fitting on the spindles by a key fastened to the spindle; those rings have grooves inside in which the key fits.

Next to the shoulder is a washer, and next to the washer is a flat ring,

and next to that flat ring is a ring with fluting-meshes. Next to the fluted ring are two plain or flat rings, and next to these flat rings is another ring with fluting-meshes, and next to that ring is another flat ring, and then comes the cap or female-screw before spoken of.

The rings on both spindles are alike in number and arrangement; the flat rings outside of the fluted rings touch one on the other; the flat rings between the fluted rings have a smaller diameter, so there is a space left between these flat rings on one spindle and those opposite on the other spindle.

Those spindles are pressed together by a shifter fitted in the frame, which shifter carries a spring; that spring presses against a moveable plate, which plate carries or has attached to it two springs which press against one of the spindles, in order to regulate the pressure on the goods.

All the machines I have described are heated by gas or hot irons, or any suitable heating arrangement.

Adjourned to November 2d, at 1 p. m.

SATURDAY, *November 2d*, 2872.

Present, counsel as before.

Continuation of the testimony of Robert Werner.

293 Q. 4. Please look at two rings attached by a cord to "Exhibit, Weitling Machine," and also at a collection of rings marked "Exhibit, Weitling Rings," and state whether you know the use of these rings in connection with the "Exhibit, Weitling Machine;" and if so, please state how they are used.

(Objected to as irrelevant and immaterial.)

A. The two rings attached to said machine by a cord have curved flutes around a periphery; the rings marked "Exhibit rings," are flat in their peripheries, and have different diameters and thicknesses. All these rings, I suppose, fit on the projections of the spindles on the Weitling machine, but I have not tried to see whether or not they would so fit; all these rings have grooves on their inside to fit on the keys, except two of them, which are female screws. I think these rings are used in the following manner: the curved rings are to make different designs in flutings or crimpings, and the flat rings are to make spaces between the flutings or crimping rings, in different widths, more or less in width.

Q. 5. Please look at the rollers marked "Exhibit, Weitling Rollers," and notice whether there are rings on those rollers, and whether those rings will fit upon the spindles on the machine, and whether those rollers will fit in the machine in the spaces occupied by those spindles, the spindles being removed therefrom.

A. Those rollers will fit in the spaces, the spindles being removed therefrom; and it is my belief that the rings on the rollers will fit on the spindles now in the machine. There are rings on those rollers of different designs, and I believe they will fit upon the spindles now on the machine.

Q. 6. State what would be the effect of those different rings adjusted in different ways on the spindles, or on the rollers, when the rollers were used on the machine, in making any article within the capacity of the machine thus constructed to produce.

294 (Objected to as irrelevant and immaterial, and because there has not, as yet, been any evidence given to show that the witness has any knowledge on the subject, or is qualified to give an opinion thereon.)

A. By varying the arrangement of the rings, different designs are to

be produced. Suppose I put flat or plain rings between fluted rings; then it is able to make a puffing.

Q. 7. What description of puffing would it then make, if it had, as you say, plain rings in the centre, and fluted rings on the outside?

(Same objection continued.)

A. It will make puffing with fluted rows on the outside, and loose crinkles without shape between the flutes; I mean without regularity of shape.

Q. 8. Look at exhibits "Weitling, Puffing," and "Weitling Puffing, No. 2," and state whether, in your opinion, those articles could be produced on that machine, "Exhibit, Weitling Machine;" and if so, state how the rings should be adjusted on the spindles or rollers to produce the article marked "Exhibit, Weitling Puffing, No. 2."

(Same objection.)

A. Yes, I think they would be produced; to produce an article like "Exhibit, Weitling Puffing, No. 2," it would be necessary to place plain rings in the centre and fluted rings on the outside of the plain rings, and then other plain rings on the outside of the fluted rings; the inside plain rings must be smaller in diameter than the fluted rings and the outside plain rings, so as to allow a space for the goods to be puffed and crinkled; the outside plain rings must press against each other, and the meshes in the fluted rings must play in each other, so as to produce the flutes.

295 Q. 9. Do you find all those kinds of rings in the collection of rings, including those on the machine now as put up?

(Same objection.)

A. Yes.

Q. 10. Please state whether or not you have been familiar with puffing and fluting and other kinds of trimming of like nature; and, if so, for how long.

A. I have been acquainted with fluting for the last forty-five years, and I have known puffing made by hand for the same time, and I have known of it being made by a sewing-machine since 1862 or 1863, and also since that time I have known of it as made by fluting-machines.

Q. 11. Have you handled a great deal of fluting and puffing?

A. Yes.

Q. 12. Have you ever made fluting and puffing?

A. I have.

Q. 13. Are you a judge of fluting and puffing?

A. I am.

Q. 14. Are you acquainted with the mechanism used in fluting and puffing machines?

A. I am.

Q. 15. Have you ever made the machinery used in fluting and puffing machines?

A. Yes; I have.

Q. 16. How long have you been working in that kind of machinery?

A. Forty-two or forty-three years.

Q. 17. Are you a judge of the mechanism of fluting and puffing machines, and skilled in their construction?

A. Yes, I am.

(Defendants' counsel offers in evidence a certified copy of let-
296 ters-patent issued to Thomas Robjohn, dated April 19th, 1864, and numbered 42404, for an "improvement in apparatus for making fluted puffing," which is marked "Exhibit, Robjohn Patent, Nov. 2d, 1872. R. E. S., Ex., &c."

(Complainant's counsel objects to its admission in evidence only on the ground of it being irrelevant to the issues in these cases.

Defendants' counsel offers as an exhibit a piece of puffing, which is marked "King Puffing, Nov. 2d, 1872. R. E. S., Ex., &c.")

Q. 18. Look at "Exhibit, King Puffing," and state whether or not that puffing is, in your opinion, the same as that manufactured by the complainant in these suits under his patent "Exhibit, Re-issue 3001."

A. It is, in my opinion, the same.

Q. 19. Please look at exhibits "Hermann & Lautenbach," and "Alex. Lyle" on the one hand, and "Exhibit, King Puffing," on the other hand, and state whether there is any difference, the "Hermann and Lautenbach" and "Alex. Lyle" on one hand, and the "King Puffing" on the other hand; and, if so, state whether or not the difference is considerable, and in what that difference consists.

(Objected to as irrelevant.)

A. I have looked at the exhibits referred to, and I find a difference between them, and I think that difference is considerable; the exhibits "Hermann and Lautenbach" and "Alex. Lyle" have a different shape and design from the King puffing. The design in the exhibits "Hermann & Lautenbach" and "Alex. Lyle," are V formed, and the shape consists in folds, running together in the centre to an angle;
297 but in "Exhibit, King Puffing" I find in the centre irregular waved crinkles.

Q. 20. What are the exhibit "Hermann and Lautenbach" and "Alex and Lyle" called as an article, or what are they?

(Objected to as before.)

A. I call them trimming.

Q. 21. Is there a difference between those articles of trimming and what is known as puffing; and, if so, state in what that difference consists.

(Same objection, and also as leading.)

A. There is a difference between those articles and what is known as puffing, in my opinion. The difference consists in this, that these trimmings have a certain shape, not like puffing.

Q. 22. Are you acquainted with the process or the method of making the "Exhibit, King Puffing," and with the process or method of making the exhibits "Hermann and Lautenbach" and "Alex. Lyle?"

A. I am.

Q. 23. Is there any difference in the process or method of making those different articles; and, if so, state what that difference is.

A. There is a difference in the process or method of making these articles.

The difference comes from the different kind of machines used in their manufacture.

The operation on the machine "Exhibit, Werner Machine," which makes trimming like the exhibits "Hermann and Lautenbach" and "Alex and Lyle" is as follows: When the material is prepared for fluting it is passed over the round bar with a straight top, between the fluting-rollers; then I put the flat bar in its place and fasten it
298 there by the keys, so that the spring projecting from the middle of the flat bar presses upon the material; then, by revolving the fluting-rollers, the material is drawn between them. The spring in the middle of the flat bar has the effect to pull back a certain quantity of the material which goes into the shape of folds of a V form before entering between the rollers. The heat of the rollers dries the material as it passes between them.

After the material has passed through between the rollers, then the protuberances keep the fluted material in its place on the rollers, and the raiser in the rear of the fluting-rollers, between the protuberances, raises the folds made in the pressure-spring in the frame before it passes between the fluting-rollers to a certain height.

Adjourned to Nov. 4th, at 1 p. m.

MONDAY, *November 4th*, 1872.

Present, counsel as before.

Caroline Weitling, (resumed.)

The witness, Caroline Weitling, having announced that she is imperfectly acquainted with the English language, and that she cannot express herself in that language with satisfaction to herself in this examination, and that she desires to have an interpreter, it is agreed by the solicitor in these cases, that M'r A. Faber du Faur shall act as interpreter for said witness, without prejudice to the testimony heretofore taken.

A. Faber du Faur, being sworn as interpreter, translates the questions and answers as follows:

Q. 53. In question No. 36 you were asked to look at the two specimens of puffing marked "Exhibit, Weitling Puffing, No. 2," and
299 state whether you saw these specimens before, and whether you know who made them; and you answered "I saw them before and my husband made them." I will now ask you, through an interpreter, how you understood that question and how you intended to answer it?

(Objected to on the ground that the witness answered the principal question No. 36 without stating she did not understand it, and it is now too late to ask the present question, several days having elapsed in the mean time. Defendants' counsel states that the further examination of this witness was postponed by the consent of the opposite counsel until this time.)

A. I meant to say that my husband had made such puffing; that "Exhibit, Weitling Puffing, No. 2," I made myself.

(Answer objected to as irresponsive.)

I understood the question to be whether such puffing had been made by my husband, my sister, and myself.

Q. 54. Please state whether or not you are familiar with the English language so as to understand it perfectly and express yourself satisfactorily in that language.

A. No.

(Defendants' counsel now offers in evidence the "Exhibit, Weitling Puffing, No. 2."

Complainant's counsel objects to the admission of such exhibit in evidence on the ground that it has not been proved to have been made prior to the granting of the letters-patent sued on in these suits.)

300 Q. 55. Please state the names of any person or persons you know to have made puffing like "Exhibit, Weitling Puffing, No. 2," if you know of any person who ever made such puffing; and state how long ago you first knew of such puffing having been made by any persons, according to your recollection.

(Objected to on the ground that the witness cannot be inquired of concerning any making of such puffing by any person or persons not named in the answer herein.)

A. In 1855 they were made by my husband, William Weitling, and myself; afterwards, from time to time, by my husband, William Weitling, my sister, Johanna Toedt, and myself.

Q. 56. Please state whether or not puffing of the same kind as "Exhibit, Weitling Puffing, No. 2," and which you say was made by Mr. Weitling, your sister, and yourself, was shown to different persons; and, if so, when and under what circumstances.

A. Yes; they were shown as samples in 1855. An attempt was made to do business with such puffing.

Q. 57. Do you or not know whether this same kind of puffing was made after 1855; and, if so, by whom?

(Same objection as to question 55.)

A. After 1855 the puffings were made by my husband, my sister, and myself.

Q. 58. Please state whether or not, when these puffings were so made after 1855, they were used or shown as samples.

A. They were only shown as samples.

Q. 59. Please state whether or not Mr. Weitling did business with some of the merchants of New York about 1855, and since that time, in trimmings of different kinds.

(Objected to as irrelevant.)

301 A. In 1855 he made samples for mantilla-trimmings for three different firms in New York City. He made samples for all three firms. Since that time he made attempts to do business; did not succeed.

Q. 60. Was it for the merchants in New York that he made samples of puffing like "Exhibit, Weitling Puffing, No. 2?"

(Objected to as leading and irrelevant.)

A. Yes; for mantilla-trimmings in 1855.

(Defendant's counsel requests the examiner to mark for identification a wooden board with two uprights, and also a turned wooden bar, and the said board is marked "Weitling's Board, Nov. 4th, 1872, R. E. S., Ex.," and the bar is marked "Weitling Bar, R. E. S., Ex.")

Q. 61. Look at the board marked "Weitling Board," and state whether you have seen it before, and state when you first saw it, and state whether you know what it is, and whether you know who made it, and what it was made for.

(Objected to as irrelevant.)

A. Yes; I have seen it before. I saw it for the first time in 1855. It serves as a table for the machine. It was made in 1855. It was made for the purpose of fastening this machine on it.

Q. 62. Was the machine fastened on it in 1855, as it now appears, and did the machine remain fastened on it for any length of time; and, if so, about how long?

(Same objection as before.)

302 A. The same machine as it is here was fastened on it in the year 1855, and remained so until within perhaps a few years, when it was taken off. This is the same board, the same standard, and the same machine.

Q. 63. Who made that board and standards?

(Same objection as before.)

A. My husband invented it, and ordered it to be made. Where it was made I cannot recollect.

Q. 64. Please look at this bar marked "Weitling Bar," and state what you know about that bar.

(Same objection as before.)

A. The object of this bar is to guide the stuff from the machine so that the puffings or similar kinds of work shall come out perfect.

Q. 65. Did you or not ever see a bar like that, arranged as that bar

is arranged on these standards, before this time; and, if so, state when you saw it arranged so for the first time, as near as you can recollect.

(Same objection.)

A. I saw this bar for the first time in 1855, on those standards on this machine.

Q. 66. Is this the same bar that you saw in 1855, or was it another bar?

A. This is another one.

Q. 67. Please describe the bar you saw arranged on these standards in 1855.

A. It was just the same as this.

Q. 68. Was more than one bar used on the standards in connection with the machine? If so, state how many were used.

A. Two were used.

Q. 69. Where were they placed?

A. One of them was placed in front for the purpose of guiding the work; the other one was placed in the rear for the purpose of fastening the stuff on the same.

303 Q. 70. State whether you ever saw that guide-bar used by any person when working the machine.

(Objected to as leading.)

A. It was used by my husband, my sister, and myself.

Q. 71. State what kind of work would be produced on that machine when this guide-bar was used.

(Objected to as irrelevant.)

A. Puffing, crimping, and fluting in white goods and in silk.

Q. 72. Please look at "Weitling Puffing, No. 2," and state whether or not work of that kind could or could not be made with the machine using that guide-bar.

(Same objection.)

A. It is very essential to have that kind of guide-bar in making such puffings.

Q. 73. Please state whether or not there would be any difficulty in making the above mentioned puffing on this machine when you used that guide-bar.

A. No; I had no difficulty then.

Q. 74. Could that kind of puffing be made in large quantities by using that guide-bar on the machine?

(Same objection, and also on the ground that the witness has not been shown to be qualified to testify on this point.)

A. Yes; it could be made in large quantities.

Q. 75. In question 8 you were asked to describe the kind of fluting or puffing, or both, and the kind of crimping he, Mr. Weitling, made with said machine, as near as you can, and you answered, "I can't say, but I can show samples of crimping." I now ask you that ques-

304 tion through an interpreter for the purpose of getting at the full meaning of your answer.

(Objected to as having been already answered by the witness.)

A. He made puffing like "Exhibit, Wietling, No. 2," and such as were crimped on one side and open on the other, and he made whole strips throughout, fancy crimping.

Q. 76. What would he do or what changes would he make in the machine to produce the different varieties of work you have mentioned?

A. He changed the rings so that he could make any kind of work.

Q. 77. State what kind of a bar was used in the other part of the

standards where I noticed a hole in one standard and a slot in the other.

A. A plain, round, straight bar covered with cloth for the purpose of fastening the work on it.

Q. 78. Please state whether you ever used the guide-bar in working the machine yourself.

A. I always used it until about the 1st of May last, when I lost it.

Q. 79. State whether or not you can recollect the appearance of the bar you lost sufficiently well to be certain that the guide-bar on the machine is like it, altogether like it.

(Objected to as leading, and as having been already answered.)

A. It is altogether like it. I ordered it and had it made exactly the same.

Q. 80. Do you know whether at any time Mr. Weitling had persons to come to his house to look at this machine? If so, please state, as well as you can recollect, why and when.

305 A. In 1865 he had an advertisement in the paper offering this machine for sale, as far as I can recollect; different gentlemen called at different times for the purpose of seeing the machine. He showed the same and explained it to them. They went off and did not call again.

Q. 81. Describe how the machine was at the time these gentlemen called to see it.

A. The machine was fastened to the board with the standards and bar. How the machine was set I do not recollect; I mean the arrangement of the rings on the spindles.

Q. 82. Do you know whether that frame and guide-bar was attached to the model of that machine when your husband sent the model to Washington?

A. I am under the impression that it was there, but I am not certain.

Q. 83. Did you ever hear your husband say anything about the frame and guide-bar being sent to Washington? If so, state when.

(Objected to, on the ground that the witness cannot testify to anything she may have heard her husband say, as such evidence would be mere hearsay.)

A. It is possible; perhaps not; it is too long to recollect; I supposed that it had been sent.

(That part of the answer, viz, the words, "I supposed that it had been sent," objected to as irresponsive and volunteered by the witness.)

Q. 84. What reason have you for the impression that the board, standards, and guide-bar were sent to Washington?

A. I suppose that my husband intended to have the whole of his invention patented.

306 Q. 85. Please state whether you recollect persons calling to see your husband about this machine, and to see this machine at other times?

A. Different persons called at different times. In 1863 Mr Werner saw the same machine at our house.

Q. 86. Do you, or not, know whether your husband sent a machine like this one to England? If so, please state in what year.

A. In 1855 he sent a complete machine to England.

Q. 87. What did he send it there for? If you know, please state.

A. He sent this machine by a friend who was going to try to make something out of it in some way or another.

Q. 88. Have you in your possession a letter written by the gentleman with whom your husband sent that machine to England?

(Objected to as irrelevant.)

A. Yes, I have a letter with me.

(Defendants' counsel requests the examiner to mark the letter referred to by the witness for identification, and the same is marked "For identification, Sully letter, Nov. 4th, 1872, R. E. S., Ex.")

Q. 89. Please look at the letter marked "Sully letter, &c.," and state whether or not that is the letter mentioned in your answer to question 88?

(Objected to as irrelevant.)

A. Yes; this is the same letter.

Adjourned to Wednesday, the 6th inst., at 1 p. m.

307 WEDNESDAY, *November 6th*, 1872.

Present, counsel as before.

Adolph Hermann resumed.

X. 77. Have you or your said firm received any bond of indemnity or other protection against you or your said firm having to pay any part of the costs or damages that may be recovered against you or your said firm in this suit against your firm?

(Objected to as irrelevant, and as wholly immaterial.)

A. I have not received any bond of indemnity or any protection whatever.

X. 78. Are you carrying on the defense of this suit against your said firm at your own cost and expense?

(Same objection.)

A. I am not.

X. 79. Do you know who is defraying the cost and expense of your defense in this suit?

(Same objection as above, and the counsel for the defendants cautions the witness to answer only so far as he has actual knowledge on the subject, and not to answer from hearsay.)

A. I do not.

X. 80. Have you ever had any conversation with Robert Werner, a defendant in one of these suits, with reference to his defraying the costs and expenses of your defence herein?

(Objected to as immaterial.)

A. I have not.

X. 81. Have you ever had any conversation with your part-
308 ner, M'r Lautenbach, or with a M'r Speilmann, in reference to defraying the costs and expenses in this suit against you?

(Objected to as irrelevant and immaterial.)

A. No, sir.

X. 82. Did you ever employ any solicitor to appear for you in this suit?

(Objected to as irrelevant and immaterial.)

A. I did not.

X. 83. Did you swear to the answer in this suit against you and M'r Lautenbach?

A. I did.

X. 84. At whose request did you swear to that answer?

(Same objection as to question 82.)

A. I think at M'r Dorsey's.

X. 85. Who introduced M'r Dorsey to you?

(Same objection.)

A. Nobody.

X. 86. Did you know M'r Dorsey previous to your swearing to your answer in this suit?

(Same objection.)

A. I did.

X. 87. How long previous?

(Same objection.)

A. A few months.

X. 88. On what occasion did you make his acquaintance?

A. I do not recollect.

X. 89. Do you say that you have never been told by any person that this suit against you should not cause you any expense or damage?

(Objected to as irrelevant and immaterial.)

309 A. I do.

X. 90. Then why did you answer to question 78 that you are not carrying on the defence of this suit against you at your own cost and expense?

(Same objection.)

A. Because it is true.

X. 91. Are you not carrying on the defence of this suit againt you?

A. I am.

X. 92. Do you mean to say that you do not expect to pay anything to anybody for the defence of this suit against you?

A. I do not.

X. 93. Do you know what became of any of the shirt-front puffing which your said firm bought of M'r Werner?

A. They were manufactured into shirt-fronts.

X. 94. Do you know by whom they were manufactured into shirt-fronts?

A. I do.

X. 95. By whom was such shirt-front puffing manufactured into shirt-fronts?

(Objected to as immaterial.)

A. By F. G. Aukam.

X. 96. Has not M'r Aukam his manufactory at Troy, N. Y., and do you not sell him material, and do you not sell the goods of his manufacture on commission for him?

(Objected to as irrelevant.)

A. M'r Aukam has his manufactory at Troy, N. Y., and we do sell him material, but we do not sell the goods of his manufacture on commission.

310 X. 97. But you do sell goods of M'r Aukam's manufacture made of material somewhat similar to the material you're selling?

(Same objection.)

A. I have done so since 1860.

X. 98. Look at the exhibit marked "Exhibit, Pipo Puffing," and state whether or not the puffing which you say you saw in 1860 in your answer to question 28 was different from that "Exhibit, Pipo Puffing," in any respect.

A. I think it was exactly like it, with the exception that the plait on the edge was a little larger.

Redirect:

Q. 99. Look at the exhibit marked "Defendant's Exhibit K, Oct. 2d, 1872, R. E. S., Ex., &c.," and state whether or not the puffing you saw in 1860 bore any resemblance to that article; and, if so, state in what respect.

(Objected to on the ground that the inquiry is improper on redirect examination.)

Question withdrawn.

Q. 100. Please state what you mean in your answer to cross-question 98, by the words, "with the exception that the plaits on the edge were a little larger;" state whether or not you mean the plaits next to the centre of the puffing, or what you do mean?

A. I mean the outside edge.

Q. 101. Can you produce now any specimens of the puffing, which you say now, in answer to question 25 and 28, you saw in 1860 or before 1864?

A. I cannot, as my sample lot of trimmings was mislaid or lost in moving my private office. The specimens I had were exactly like the "Exhibit, Pipo Puffing," with the exception that the plaits were a little larger.

311 Subscribed and sworn to before me this 6th day of November, 1872.

ADOLPH HERMANN.
R. E. STILWELL.
Examiner, &c.

THURSDAY, *November 7th*, 1872.

Present, counsel as before.

Robert Werner, (resumed.)

The witness, Robert Werner, having announced that he is imperfectly acquainted with the English language, and that he cannot express himself in that language with perfect satisfaction to himself in this examination, and that he desires to have an interpreter, it is agreed by the solicitors in these cases that M'r A. Faber du Faur shall act as interpreter for said witness, without prejudice to the testimony heretofore taken.

A. Faber du Faur, being duly sworn as interpreter, translates the questions and answers as follows:

(Witness continues his answer to last question.)

The other machine, King's machine, described in "Exhibit, Re-issue 3000," has an arched guide, which I have described before, through which the prepared stuff or material passes freely, and the central crinkles are formed between the rollers while the material is passing through them, and it comes out finished after having been dried by the machine.

The difference consists in having the V-shaped centre ruffles as folds formed before the material enters the rollers, in the Werner machine, while in the machine described in the "Exhibit, Re-issue 3000,"

312 the centre crinkles between two rows of fluting are formed between the rollers, for the reason that the arched guide draws in material from the sides, which having no room in the centre of the rollers is compelled to rise up and to form irregular crinkles or puffs between the fluting rollers; while on the other hand the pressure-spring in "Exhibit, Werner Machine," produces a more or less regular design in the form of V-shaped folds, the material being held fast and pulled back, and passed through the rollers in a flattened condition, and is only raised by means of the raiser and protuberances after passing through the rollers; the V-folds can be made without rollers by taking hold of the stuff on two sides, and drawing it through beneath the pressure-spring.

Q. 24. Do you, or not, consider what you term the "pressure-spring" on the machine marked "Exhibit, Werner Machine," in any sense of the word a "guide?"

(Objected to as irrelevant.)

A. No, it's not a guide.

Q. 25. Is a guide of any kind necessary in making your trimming, or

the trimming marked "Exhibit, Hermann and Lautenbach" and "Exhibit, Alexr. Lyle," on the machine marked "Exhibit Werner Machine?"

(Same objection, and as leading.)

A. No; all the guiding consists in guiding the material with the hand over to the round straight bar; when the material is wound up on a roller it will feed itself by the motion of the fluting rollers alone.

(Complainant's counsel objected to the part of the answer between the words "all" and "bar," as irresponsive, and also to that part of the answer after the word "bar" as irresponsive.)

313 (The further examination of this witness is suspended for the purpose of continuing the examination of Mrs. Weitling.)

Caroline Weitling, (resumed:)

Q. 90. Please look at that letter, marked, for identification, "Sully Letter, Nov. 4th, 1872," and state what time it was received—about.

(Objected to as irrelevant.)

A. About June, 1855.

Q. 91. State whether or not you know the contents of that letter.

(Objected to as irrelevant.)

A. I know it perfectly.

Q. 92. Please state what that letter refers to, if you know, and, if so, state what.

(Objected to as irrelevant, and also because the witness is incompetent to testify on the subject before the letter is offered in evidence.)

A. It refers to this man's intention of making a machine in England after his perfect recovery; he was sick at the time; and that he had not seen that kind of work in England, or his wife, who had already visited many stores.

(After the word "recovery," objected to as irresponsive.)

Q. 93. Who do you mean by that man?

(Objected to as irrelevant.)

A. Mr Charles Sully.

(Defendant's counsel offers in evidence the letter referred to.

314 Complainant's counsel objects to the admission of said letter in evidence on the grounds that it is irrelevant, and that it is incompetent to prove any matter in issue in these suits.)

Q. 94. Look at that letter and you will find the words, "I shall not loose any time in pushing your trimmings in the trade," and please state if you know what trimmings are there referred to.

(Objected to as irrelevant, and because the witness cannot possibly know the intentions of the writer in using the words quoted.)

A. It refers to all the trimmings that can be made on the machine "Exhibit, Weitling Machine;" puffing, fluting, and crimping.

Q. 95. Do you or do you not know whether your husband made other rollers and other spindles, and other rings, to be used on the machine marked "Exhibit, Weitling Machine," besides those which have been offered in evidence, and which are now before you?

(Objected to as irrelevant.)

A. Yes; I have several unfinished spindles and rings at home; several rings have been lost.

Q. 96. You say, in answer to question 86, that he sent a complete machine to England; can you state what kind of a machine that was, or what it was like?

(Same objection.)

A. It was a crimping-machine like "Exhibit, Weitling Machine;" I do not recollect how the rings were set.

Q. 97. Please state whether or not, if you know, *if* the board and standard and guide-bar constituted a part of that machine.

(Same objection.)

315 A. That I cannot tell.

Q. 98. Do you, or not, remember your husband coming home, at any time, and stating that he had seen in the store-windows the same kind of articles that his machine would produce?

(Objected to as irrelevant, and because the witness cannot testify as to anything her husband may have said to her.)

A. Yes; several years ago he came home and told me so.

Q. 99. What did he say on that occasion, as near as you can recollect?

(Same objection.)

A. He told me that a good many were now getting rich manufacturing articles that we had been making on our machine.

Q. 100. About how many years ago is that?

(Objected to as irrelevant.)

A. About four or five years; I can't tell exactly.

(Defendant's counsel asks the examiner to mark for identification a paper signed by Charles Sully, which paper is marked "Sully Receipt, Nov. 7th, 1872, R. E. S., Ex.")

Q. 101. Please look at the paper marked "Sully Receipt," and state whether you have ever seen it before, and, if so, when you first saw it; and state, if you know, whose writing it is.

(Objected to as irrelevant.)

A. I have seen it in April, 1855, when my husband received it; it is in Charles Sully's handwriting.

316 Q. 102. Please look at that paper marked "Sully Receipt," and state whether or not you are acquainted with its contents.

(Objected to as irrelevant, and because the paper itself is the best evidence of its contents.)

A. Yes; I am acquainted with its contents.

Q. 103. On that paper are the words, "I have this day received a complete fancy crimping-machine, which you permit me to use in any part of England." Please state, if you know, what machine that language refers to; and, if you do, please describe it.

(Objected to as irrelevant.)

A. It refers to a machine like "Exhibit, Werner Machine."

(Defendant's counsel offers in evidence the paper marked "Sully Receipt."

Complainant's counsel objects to the admission of said paper in evidence, as irrelevant and incompetent.

Defendant's counsel requests the examiner to mark for identification a paper purporting to be a bill in the German language, which is marked "Miller Bill, Nov. 7th, 1872, R. E. S., Ex., &c.)

Q. 104. Please look at the paper now handed to you and marked "Miller Bill," and please state whether you have ever seen it before, and, if so, state when you first saw it, and whether or not you are acquainted with its contents.

(Objected to as irrelevant.)

A. I first saw it in 1855; I am acquainted with its contents.

317 Q. 105. Please state the contents of that paper in substance.

(Same objection as to question 102.)

A. It was a bill for work done on a crimping-machine, by Joseph Miller for William Weitling.

Q. 106. Please state what William Weitling is referred to, and what machine is referred to in that paper.

(Objected to as irrelevant.)

A. William Weitling, my husband. It refers to the crimping-machine my husband had made. Joseph Miller did part of the work on them, cutting teeth, burning, &c.

Q. 107. State whether or not the machine marked "Exhibit, Weitling Machine" is one of the machines you refer to in your last answer.

(Same objection, and as leading.

Defendant's counsel offers in evidence the paper marked "Miller Bill."

Complainant's counsel objects to the admission of said paper in evidence on the ground that it is irrelevant and incompetent.

Defendant's counsel requests the examiner to mark for identification a letter, which is marked "S. Weissenberger Letter.")

Q. 108. Please look at the paper marked "S. Weissenberger Letter" and state whether you know who wrote it, and the person to whom it was written, and the time it was received by the person to whom it was written, and state also whether you are acquainted with its contents.

(Objected to as irrelevant.)

318 A. As far as I know, it is written by S. Weissenberger, but I don't know his handwriting. It was written to my husband. It was received by my husband in the spring of 1855. About a week or ten days after that time the writer called at our house, stayed with us a week, and then went to France. I am acquainted with the contents of the letter.

(Defendant's counsel offers in evidence the letter referred to.

Complainant's counsel objects to the admission of said letter in evidence as irrelevant and incompetent.)

Q. 109. State whether or not you know what kind of samples are spoken of in that letter, and, if so, state what kind.

(Objected to as irrelevant.)

A. The samples that were sent had been made on this machine "Exhibit, Weitling Machine," but I do not recollect the patterns.

Q. 110. Do you know for what purpose those samples were sent, and where they were sent?

(Same objection.)

A. They were sent to Philadelphia so that M'r Weissenberger could get acquainted with them, because he intended to take a machine to France.

Q. 111. You say, in your answer to question 108, "that about a week or ten days after that day that the writer called at our house, stayed with us a week, and then went to France." Was there anything said about the machine and the samples, or either of them, at that time,

319 between M'r Weitling and M'r Weissenberger? If so, state the nature of any conversations between them.

(Objected to as irrelevant.)

A. M'r Weissenberger's coming to New York referred to this machine alone; they were talking about it and looking at the machine and the work; whether M'r Weissenberger took a machine with him to France I do not recollect; he died four weeks after his departure.

Q. 112. Was that machine the same as the one marked "Exhibit, Weitling Machine?"

(Objected to as irrelevant.)

A. It was Weitling's machine; how the rings were set I do not recollect.

Adjourned to 8th inst. at 1 p. m.

FRIDAY, *November 8th*, 1872.

Continuation of the testimony of Caroline Weitling:

Q. 113. Are you able to state whether or not your husband sent one of the machines he invented to France? If so, state when that was.

(Objected to as irrelevant, because no exhibition or use of any machine in France is material unless such machine was described in a printed book or other publication, and because there is no distinct reference to any special machine in the question, and because it is wholly immaterial in every aspect whether or not he sent any machine of his invention to France.)

320 A. In the spring of 1855 he sent three to France.

Q. 114. Were those machines which you say he sent to France in the spring of 1855 like the machine "Exhibit, Weitling Machine," in evidence in this case?

(Objected to as irrelevant and immaterial.)

A. I suppose they were the same; I didn't see them packed.

Q. 115. Had your husband at that time any other machines of his own invention that he was trying to get upon the market?

(Same objection.)

A. No.

Q. 116. Do you know if your husband had any correspondence with any persons in France in reference to the machines he sent to France? If so, state about what time he had such correspondence, if any, and as near as you can recollect with whom.

(Same objection.)

A. He had; in the summer of 1855 he received several letters from S. Weissenberger, Kuhlmann, Fisher, and Rieck.

Q. 117. Have you any of those letters now in your possession?

(Same objection.)

A. Yes; I have.

(Defendant's counsel requests the examiner to mark for identification a letter, which is marked "Weissenberger Letter No. 2, Nov. 8th, 1872, R. E. S., Ex., &c.," also a receipt marked "Weissenberger Receipt,

321 Nov. 8th, 1872, R. E. S., Ex.," also a copy of certificate in French, which is marked "French Certificate, Nov. 8th, 1872, R. E. S., Ex., &c."

Q. 118. Look at paper marked "Weissenberger Letter No. 2," and state whether or not you knew this letter to have been received by your husband, and whether you know about when it was received and what it refers to.

(Same objection.)

A. Yes; my husband received it in 1855; it refers to his crimping-machine like "Exhibit, Weitling Machine."

Q. 119. You say in your answer to question 114, "I suppose they were the same; I did not see them packed;" state whether you know of your husband being engaged at that time in packing them.

(Same objection.)

A. Yes; I know he was engaged in packing them; I have seen the box and know they were sent off.

Q. 120. Please state whether or not you know what purpose or object your husband had in view in sending the machines he invented to England and France.

(Same objection.)

A. He wanted to do business with them, and sent them to the Paris Exposition for that purpose.

Q. 121. Please look at the paper marked "Wiessenberger Receipt,"

and state whether you have ever seen it before, and, if so, when you first saw it, and whether you are acquainted with its contents, and, if you are, please state its contents.

(Objected to as irrelevant and immaterial, and also because the paper itself is the best evidence of its contents, and that the witness is incompetent to testify as to its contents.)

322 A. Yes; I have seen it in May, 1855, when my husband received it; I know the same to be a receipt for two crimping-machines my husband delivered to M'r Weissenberger.

Q. 122. Please state where your husband, William Weitling, delivered those machines to M'r Weissenberger.

(Objected to as irrelevant and immaterial.)

A. In New York, in 1855; he stayed with us a week at the time.

Q. 123. Do you know whether your husband received this paper marked "French Certificate," and, if so, when?

(Same objection.)

A. He received it in the year 1855.

(Defendant's counsel offers in evidence the original and translations of the papers marked "Weissenberger Letter, No. 2," and the paper marked "Weissenberger Receipt Letter, No. 2," and the paper marked "Weissenberger Receipt," and the paper marked "French Certificate."

Complainant's counsel objects to the admission of said papers in evidence, on the grounds that they are wholly irrelevant and immaterial, and especially as to the paper marked "Weissenberger Letter, No. 2;" that no prior use or exhibition of the machine and article described in the "Exhibits, Re-issue 3000 and 3001," can be shown to have happened in France, unless the same was published in some book or other publication; and as to the "Weissenberger Receipt," that is in-

323 competent to prove any possible issue in these cases; and as to the "French Certificate," that it purports to be a copy merely, and is also objectionable on all the grounds stated in this objection in reference to the two other papers.)

Cross-examined:

X. 124. Did not your husband make several varieties of crimpings on his machine "Exhibit, Weitling Machine?"

A. Yes; he made different varieties of crimpings.

X. 125. Have you in your possession any specimens of any crimpings made by your husband on his said machine, prior to the year 1860?

A. I still have some puffings at home; also crimpings and flutings—some made of silk.

(Complainant's counsel objects to so much of said answer as refers to puffing and fluting as being irresponsive to the question and volunteered by the witness.)

X. 126. What do you understand by the word "crimping?"

A. By "crimping" I understand a material brought into sharp creases of any pattern.

X. 127. What do you understand by the word "fluting?"

A. By "fluting" I understand bringing into straight, round, or sharp folds or creases.

X. 128. What do you understand to be the difference between a "crimping" and "fluting?"

A. According to my opinion there is no difference; they are substantially the same.

X. 129. Have you obtained letters-patent for the machine, "Exhibit, Weitling Machine," in this country?

A. Yes; I have.

X. 130. Are you the owner of said patent?

324 A. I am the owner of one-half.

X. 131. Who applied for that patent originally?

A. My husband, William Weitling.

X. 132. Was your husband a practical mechanic?

A. He had not learned it as a regular trade, but he could do ordinary work for himself.

X. 133. Was he well acquainted with the English language?

A. He understood it perfectly, and could write it.

X. 134. Was he not occasionally employed as an interpreter to interpret into the English language, or as a translator into the English?

A. He may have translated into English occasionally; he was employed in Castle Garden as registry clerk for seven years.

X. 135. What was your husband's occupation in 1855, at the time he invented the machine, "Exhibit, Weitling Machine?"

A. He was at that time owner and editor of the German paper, "Republic der Arbeiter."

X. 136. Please look at the paper marked "Defendant's Exhibit H," and state whether you ever saw that paper before.

A. Yes, I have seen it.

X. 137. Did you ever swear to that paper?

A. Yes, I have.

X. 138. Did you hear that paper read over to you before you swore to it?

A. It was read over to me, but I did not understand it.

X. 139. Do you know what is meant by the expression "swearing to a paper?"

A. I did not know it at the time; it means that I should assert under oath that the contents are correct.

X. 140. Do you know what you swore to in that paper?

(Defendants' counsel objects to the witness answering any questions as to her affidavit until the same is read over to her, and she

325 has the opportunity of stating whether that is her affidavit; and whether it is or not so, that she may have an opportunity of making such explanations as to the same, or its contents, as might be in accordance with the facts of the case or in explanation thereof. The affidavit is not at this moment read to the witness.)

A. I cannot recollect now.

X. 141. Do you not recollect any part of that affidavit?

A. I can recollect some part of it; it was an affidavit about my crimping-machine.

X. 142. Do you remember about what time you swore to it?

A. I can't recollect exactly; it may have been in September.

X. 143. Where did you swear to that affidavit?

A. In No. 6 Wall street, but I am not sure as to the number.

X. 144. In what office did you swear to that affidavit?

A. In M'r Dorsey's office.

X. 145. How came you to swear to that affidavit before you fully understood it?

A. I acted without reflection and in a hurry.

X. 146. Who drew that affidavit up?

A. M'r Dorsey.

X. 147. Did you tell him what you could swear to, while he was writing it?

(Objected to as irrelevant and immaterial.)

A. Yes.

X. 148. Did he read that affidavit over to you before you swore to it?

A. M'r Dorsey read it over to me once.

X. 149. Did you ever tell him that you were not well acquainted with the English language?

A. I cannot recollect.

326 X. 150. Have you ever read that affidavit over since the day you swore to it?

(Objected to as irrelevant and immaterial.)

A. I never saw it again up to this time.

X. 151. Did you ever hear from any person what you had sworn to in that affidavit?

(Same objection.)

A. Yes; some part of the contents were told to me by somebody.

X. 152. Who told you some part of the contents.

A. M'r Ropes.

X. 153. Who is M'r Ropes?

A. He is vice-president of the India-Rubber Comb Company.

Adjourned to 9th instant at 11 a. m.

SATURDAY, *November 9th*, 1872.

Present, counsel as before.

Robert Werner, (resumed.)

Q. 26. Is the arched guide mentioned in "Exhibit, Re-issue 3000," necessary to make the article of puffing mentioned in "Exhibit, Re-issue 3001?"

(Objected to as irrelevant and immaterial.)

A. The guide mentioned in the "Exhibit, Re-issue 3000" is not exactly necessary for making the puffing described in "Exhibit, Re-issue 3001;" that puffiing can also be made without the guide by passing the stuff to the rollers; but the arched guide directs the stuff or material into the rollers always in the same direction.

Q. 27. State whether or not the arched guide above spoken of,

327 if attached to the Werner machine in place of the pressue-spring, could make work like "Exhibit, Hermann and Lautenbach," and "Exhibit, Alexander Lyle."

(Same objection.)

A. No; it could not.

Q. 28. Would the pressure-spring above spoken of, or an inst'ument of like nature, if used on the machine described in "Exhibit, Re-issue 3000," or on a similar machine, in the place of the arched guide, be able to make the article of puffing described in "Exhibit, Re-issue 3001," or a similar article?

(Same objection.)

A. No; the spring in "Exhibit, Werner Machine" could not make the puffing described in "Exhibit, Re-issue 3001," if used on the machine described in "Exhibit, Re-issue 3000," or on a similar machine.

Q. 29. Please state whether articles of puffing similar to the article described in "Exhibit, Re-issue 3001," can be made on a machine as described in "Exhibit, Re-issue 3000," without the arched guide mentioned in the patent.

(Same objection, and also on the ground that the machine described in the "Exhibit, Re-issue 3000," includes the arched guide.)

A. Yes.

Q. 30. Please look at Exhibits J, K, L, M, N, O, and state whether or not any and all of these exhibits were made by you; and, if so, state about when they were made, and whether they are all substantially alike; and if any or all of them were made by you, state which of them were made by you, and which of them were not made by you.

(Same objection.)

328 A. I have made some of them; I can't now tell exactly which, the long stripes which I made having been cut; but I recognize the ends of Exhibits J, K, & M, which have been marked by the persons who saw them made. They are all substantially alike; I prepared the stuff and guided it to the rollers by hand.

Q. 31. State whether or not you made those Exhibits J, K, & M on a machine; and, if so, state what kind of a machine, and whether or not you used an arched guide, or anything representing an arched guide.

(Same objection.)

A. Yes; I made them on a fluting-machine. I did not use an arched guide, or anything representing an arched guide, in making them. I used my hand only for feeding the prepared material to the rollers.

Q. 32. What do you mean by the prepared material?

(Same objection.)

A. The material was moistened with sizing.

Q. 33. Is that all you mean by the expression "prepared material?"

(Same objection.)

A. That is all.

Q. 34. What do you mean by "fluting-rollers?"

(Same objection.)

A. Such rollers as are in "Exhibit, Werner Machine."

Q. 35. Do you mean such "fluting-rollers" as are described in "Exhibit, Re-issue 3000?"

(Same objection, and as leading.)

A. Yes.

329 Q. 36. You say, in answer to question 21, there is a difference between the trimming marked "Exhibits, Hermann & Lautenbach" and "Alex. Lyle," and the puffing marked "King's Puffing;" the difference consists in this, that these trimmings have a certain shape not like puffing; please state, if you can, more in detail of what that difference consists.

(Same objection.)

A. The difference in form is, that in "Exhibit, Hermann and Lautenbach," and "Exhibit, Alex. Lyle," the central folded or ruffled part, between the fluting, forms an acute angle at the centre in the form of a V, which form is more or less regular, and has no resemblance to puffing, in the proper sense of the word. The central part in "Exhibit, King's Puffing," forms a crinkled, waved, raised part being a puffed surface, to be used as puffing at once.

Q. 37. Look at "Exhibit, Werner Patent," and the drawing annexed thereto, and state whether or not Exhibits, "Hermann & Lautenbach," and "Alex. Lyle," were made in conformity to that patent and that drawing.

(Same objection.)

A. Yes, except that the drawing annexed to "Exhibit, Werner Patent," represents the centre ruffles as too regular and in straight lines. The exhibits referred to are, however, made in accordance with the specifications in the patent.

Q. 38. Were these exhibits made under and in pursuance of that patent "Exhibit, Werner Patent?"

(Same objection.)

A. Yes, they are.

Q. 39. Do you know the principle in mechanics of the arched
330 guide mentioned in "Exhibit, Re-issue 3000;" and do you know the principle in mechanics of what you call the pressure-spring attached to "Exhibit, Wer' Machine;" and if so, is the principle of both the same, or do the principles differ?

(Same objection.)

A. Yes, I know the mechanical principle of the arched guide described in the "Exhibit, Re-issue 3000." It consists in raising the stuff or material in the centre when the material passes the same. Its office is to guide the material passing freely through it to the fluting-rollers. The pressure-spring in "Exhibit, Werner Machine," is entirely different from the arched guide, and does not have the office of guiding the material between the fluting-rollers. The spring presses with a certain force in the material, holding back part of it so as to produce the V-shaped ruffles or folds before the material, pushed back by the machine, reaches the rollers.

The principles of both devices are different; the arched guide acts without any pressure on the material; the pressure-spring on the contrary holds the material back to a certain extent, and causes the same to be drawn *a*nward by the rollers; the said spring exercising pressure and causing friction. The result produced by the two devices are also different. I am a practical mechanic.

Q. 40. Look at the exhibit marked "Weitling Bar," and state whether you know its nature, purpose, and operation in connection with the "Exhibit, Weitling Machine;" and, if so, state what its character, purpose, and operation are.

(Same objection.)

A. I have looked at the bar marked "Exhibit, Weitling Bar;"
331 the purpose of the same is, in my opinion, to pass over the same, the material which has to go through the fluting-rollers, for a similar purpose as that of the arched-guide in the "Exhibit, Re-issue 3000," namely, to raise the material in the centre, before it reaches the fluting-rollers.

Adjourned to 11th inst., at 1 p. m.

MONDAY, *November 11th*, 1872.

Present, counsel as before.

Adjourned to 12th inst., at 1 p. m.

TUESDAY, *November 12th*, 1872.

Present, counsel as before.

Continuation of the testimony of Robert Werner.

Q. 41. Look at "Exhibit, Weitling Puffing, No. 2," and "Exhibit, King's Puffing," and state whether they are different, or whether they are alike.

(Objected to as irrelevant.)

A. I find them substantially alike, only "Exhibit, King's Puffing," has two rows of puffing and is sewed up, while the "Exhibit, Weitling Puffing, No. 2," has but one row, and is not sewed up; the design is otherwise the same.

Q. 42. When did you first see the "Exhibit, Weitling Machine?"

A. 1863.

Q. 43. What, if any, difference is there between the arched-guide described in "Exhibit, Re-issue 3000," and the "Exhibit, Weitling Bar," in their action on the material to be passed into the rollers of the respective machines, the Weitling machine and King's machine?

(Same objection.)

332 A. There is no difference between the arched-guide described in "Exhibit, Re-issue 3000," and the "Exhibit, Weitling Bar," in their action on the material; the office of both of them being to raise up the material more or less in the centre, and to supply material enough for forming crinkles, or puffing between the fluting-rollers.

Q. 44. Will the machine described in "Exhibit, Re-issue 3000," in the same impression, such articles as tin-foil, as upon linen, or muslin, or alpaca?

(Same objection.)

A. Yes, it will.

Q. 45. Look at "Exhibit, Robjohn Patent," and the drawings annexed thereto, and state whether or not you discover a guide in combination with a fluting-machine in said patent and drawings thereto annexed.

(Same objection.)

A. I find in "Exhibit, Robjohn Patent," on drawing, sheet No. 1, two fluting-rollers, arranged one above the other, the same as in "Exhibit, Re-issue 3000;" I also find in drawing, sheet No. 2, figure 2, two guides, C and C; they are secured in front of the fluting-rollers, both of them being in connection with the fluting-rollers A, A, A; according to the specification, the office of the said guide is to guide to the fluting-rollers the material passing through the guides.

Q. 46. Have you constructed a machine in combination with the guides described in "Exhibit, Robjohn Patent?"

(Same objection.)

A. Yes, I have.

Q. 47. Can you describe the difference, if there is any difference, between the fluting-rollers described in "Exhibit, Re-issue 3000," and the fluting-rollers described in "Exhibit, Robjohn Patent?"

(Same objection.)

333 A. The rollers in "Exhibit, Re-issue 3000" have fluting-meshes in a longitudinal direction on the surface, interrupted by annular, smooth zones, corresponding to their functions.

The rollers in "Exhibit, Robjohn Patent," have likewise fluting-meshes arranged longitudinally on their surface. The same have also at certain places annular zones, forming smooth surfaces, corresponding to the use of the rollers. I see no other special difference except the different purposes for which the rollers are used.

(Defendant's counsel offers in evidence a certified copy of a letters-patent granted to the complainant 23d day of October, 1866, No. 59036, together with the file wrappers of the same, and the same is marked "Def'ts' Exhibit, 59036, November 12th 1872. R. E. S., Ex.")

(Defendants' counsel requests the examiner to mark for identification two samples of puffing, which are marked "Puffing of 1866. R. E. S., Ex.")

Q. 48. Look at "Exhibit, 59036," and state whether or not you are acquainted with the fluted puffing described in said exhibit and depicted on the drawing thereunto annexed, and, if so, how it is made and what it is.

(Same objection.)

A. Yes, I am acquainted with such fluted puffing; it has a flattened

part on each side, between which parts there are straight fluted cross-ribs, generally called flutes; the same are made on an ordinary fluting-machine, having at distances corresponding to the width the articles are to have, smooth annular zones for receiving smoothers or
334 breakers similar to those described in "Exhibit, Re-issue 3000;" or the fluting rollers may also have flanges in the manner in which older fluting-machines have been constructed.

These annular zones in connection with the above-mentioned smoothers or breakers or flanges form the smooth sides.

The fluting-meshes between the same form the central fluted part like "Exhibit Puffing" of 1866.

Such fluting machines have long been known prior to 1866.

"Exhibit, Robjohn Patent" shows one of the same kind and can be used for making puffing like "Exhibit, Puffing of 1866."

The greater or smaller width of the flutes does not here come into consideration.

Q. 49. State what you mean by the language, "it has a flattened part on each side, between which parts there are straight fluted cross-ribs."

(Same objection.)

A. I mean that it has flattened borders and flutes between the same.

Q. 50. What is the condition of the article "made in accordance with Exhibit, 59036," after it is laundered?

(Same objection.)

A. After the puffing described in "Exhibit, Puffing of 1866" are washed, they assume the same form as ordinary puffing made by hand, but the laundress can impart to them different kinds of smoothing-irons as far as the material allows of it.

Q. 51. Look at "Exhibit, Puffing of 1866," and state whether or not that puffing is the puffing described in "Exhibit, 59036."

A. The part of "Exhibit, Puffing of 1866," marked "A" in the margin, is as described in "Exhibit, 59036." The part marked "B" is the same after being washed and laundered.

335 Q. 52. Look at the article marked "Def'ts' Exhibit B," and state whether that article is the article described in re-issue 3001, after it has been washed?

(Same objection.)

A. It will look exactly like Exhibit B.

Adjourned to 13th instant, at 1 p. m.

WEDNESDAY, *November 13th*, 1872.

Present, counsel as before.

Continuation of the testimony of Robert Werner.

(Defendants' counsel offers in evidence letters-patent granted to the complainant Feb. 26th, 1867, No. 62492, and the same is marked "Exhibit, 62495, Nov. 13th, 1872, R. E. S., Ex.," and also the file-wrappers and contents pertaining to the same patent, which are marked "Exhibit, File-wrapper, No. 62492, Nov. 13th, 1872, R. E. S., Ex.;" also, the file-wrapper and contents of re-issued letters-patent 3000, granted to the complainant June 23d, 1868, which is marked "Exhibit, File-wrapper, Re-issue 3000, Nov. 13th, 1872, R. E. S., Ex.;" also, the file-wrapper and contents of re-issued letters-patent 3001, granted to the complainant June 23d, 1868, which is marked "Exhibit, File-wrapper, Re-issue 3001, Nov. 13th, 1872, R. E. S., Ex.;" also, a certified copy of the patent granted to Caroline Weitling and W'm C. McIntyre, August 27th, 1872, No.
336 130962, which is marked "Weitling Patent, Nov. 13th, 1872, R.

E. S, Ex.;" also, file-wrapper, and contents, and drawing in the matter of the application of W'm Weitling, filed March 8th, 1855, which is marked "Exhibit, Weitling Application, Nov. 13th, 1872, R. E. S., Ex.;" also, the file-wrapper, contents, and drawing, in the matter of the letters-patent granted Caroline Weitling, administratrix, and W'm C. McIntyre, dated Aug. 27th, 1872, which is marked "Exhibit, Weitling File-wrapper, Nov. 13th, 1872, R. E. S., Ex.")

Q. 53. Please state whether or not there is any difference in the puffing described in "Exhibit, Re-issue 3001," and the puffing "Exhibit, Puffing of 1866," and the puffing marked "Exhibit, Weitling Puffing, No. 2," after those puffings have been once laundered?

(Objected to as irrelevant.)

A. There is no difference.

Q. 54. Look at exhibit marked "Standard Puffings, Sept. 26th," and notice figures from 1 to 13, inclusive, and state if there is any difference between the puffing represented by those figures and the puffing described in "Exhibit, Re-issue 3001," after puffing described in "Exhibit, Re-issue 3001," has been laundered.

(Same objection.)

A. There is no difference.

Adjourned to 14th inst., at 1 p. m.

[Here follows diagram marked page 337.]

338 *Exhibit Weitling Patent, Nov. 13th, 1872,—R. E. S., Ex'r.*

UNITED STATES PATENT OFFICE.

William Weitling, deceased, of New York, N. Y., (Caroline Weitling, administratrix,) assignor of one-half of his right to W'm C. McIntire, of Washington, District of Columbia. Improvement in Fluting-Machines. Specification forming part of Letters Patent No. 130962, dated August 27, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, William Weitling, of New York, in the county of New York and State of New York, have invented certain new and useful improvements in rolls for fluting-machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing making part of this specification.

My invention has for its object to produce a roll or rolls for fluting-machines capable of being made to vary the pattern or design of their impress; and consists in forming the roll or rolls of a hollow mandrel and one or more removable sleeves, as will be hereinafter more fully explained.

To enable those skilled in the art to make and use the same I will proceed to describe the construction and operation, referring, by letters, to the accompanying drawing.

Figure 1 is a top view of a fluting-machine embodying my improvement. Fig. 2 is a vertical section at the line *x x* of Fig. 1. Fig. 3 is a transverse detail section, showing a mode of securing the bearings or boxes in place; and Fig. 4 is another detail view, showing a means of securing the sleeves (where two or more are used) in proper relation to each other.

Similar letters denote like parts in the several figures.

A represents the frame, so constructed that bearings B B may be arranged therein and springs or spring-plates C C, giving an opportunity for slight movement to the rolls in order that they may adapt themselves to varying thicknesses of material upon which they may be operating.

I have shown the bearings B B as made in sections and arranged in one manner within the frame. This, of course, may be changed to suit circumstances.

As the main feature of my invention rests in the construction of the roll or rolls, I will describe them accurately, leaving the drawing alone to explain the other parts. G are hollow mandrels arranged to turn in proper bearings of a fluting-machine, and the projecting or fluting ends are adapted to receive one or more fluting-sleeves, J. The object of making a single sleeve removable is in order that it may be changed and one substituted having the flutings or corrugations finer or coaser, as may be desired; and where two or more are used they may be of the same or varied corrugations, parallel or at different angles and curves to the axis, and arranged upon the hollow heating-mandrel in such way as to produce any regular or varied design—for instance, part coarse and part fine, or all of a size, in straight, serpentine, or zigzag lines. These sleeves may be secured in any desirable manner to the mandrel, though I have shown them secured by being clamped between an annular shoulder near the frame and a nut, I, at the extreme end of the mandrel. Of course washers would be necessary between the last sleeve and the nut where a limited number is used, and in some instances it might be desirable to use them between each or any two of the sleeves to break the continuity of the flutes.

I have shown, as a means of securing the sleeves in proper relative position one with another, a groove on the interior of the sleeve adapted to receive a loose independent feather, so that the grooves, being placed in line and the feather put therein, fix the relation of the sleeves, without preventing them, however, as a combined family of sleeves, from being moved or adjusted upon their mandrel.

Having described my invention, what I claim as new, and desire to secure by letters-patent, is—

A roll or rolls for fluting-machines composed of a hollow heating-mandrel and one or more removable corrugated sleeves, substantially as and for the purpose set forth.

WILLIAM WEITLING.

In presence of—
WILLIAM VETTER.
PHILIPP WEBER.

339 THURSDAY, *Nov.* 14*th*, 1872.

Present, counsel as before.

Continuation of the testimony of Robert Werner.

(Defendants' counsel offers in evidence the "Exhibit, Weitling Puffing, No. 2."

(Complainant's counsel objects to the admission of the exhibit in evidence on the ground that the same has not been made prior to the granting of the patents "Exhibits, Re-issue 3000 and 3001.")

Q. 55. What is the nature or character of the differance in the King puffing, as described in "Exhibit, Re-issue 3001," as it comes out of the machine, and before it is washed, and the puffing as represented on the card marked "Exhibit, Standard Puffing," figures 1 to 13?

(Objected to as irrelevant.)

A. The difference of the two puffings is in the design only; both of them have flat borders on the sides, and puffed parts in the centre. The machine "Exhibit, Re-issue 3000," embosses only a certain irregular configuration or shape of puffing into the material, but when the puffing described in "Exhibit, Re-issue 3001," is washed, then it becomes the same as the puffing shown on the "Exhibit, Standard Puffing."

(Complainant's counsel objects to the following words in this answer, namely: "The machine 'Exhibit, Re-issue 3000,' embosses only a certain irregular configuration or shape of puffing into the material," as irresponsive, and volunteered by the witness.

340 (Defendants' counsel requests the examiner to mark, for identification, a machine which is marked "Exhibit, Robjohn Machine, Nov. 14th, 1872, R. E. S., Ex.," and also two guides, which are marked "Exhibit, Robjohn Guides, No. 1 and No. 2, Nov. 14th, 1872, R. E. S., Ex."

Q. 56. Look at the machine marked "Exhibit, Robjohn Machines," and guides marked "Exhibit, Robjohn Guides, No. 1 and 2," and state whether or not said machine is made in accordance with and corresponding to the "Exhibit, Robjohn Patent."

A. Yes, the fluting-rollers, smoothers, and guides are made in accordance with and corresponding to the "Exhibit, Robjohn Patent."

Q. 57. Please look at the exhibit marked "Robjohn Machine," and the guides marked "Exhibit, Robjohn Guides, No. 1 and 2," and state whether or not those exhibits show the combination of guides with fluting-rollers.

A. Yes, they show two guides in combination with fluting-rollers, as shown in "Exhibit, Robjohn Patent."

(Defendants' counsel now offers in evidence the "Exhibits, Robjohn Machine, and Robjohn Guides, No. 1 and 2."

Complainants' counsel objects to the admission of the same in evidence as being immaterial and irrelevant, and also as not being the best evidence, a certified duplicate of the model in the Patent-Office, deposited by Robjohn upon his application for his said patent, being the only proper and pertinent evidence of the machine described in his patent.

341 Defendants' counsel requests the examiner to mark for identification two implements which are marked "Defendants' Exhibits S and T, Nov. 14th, 1872, R. E. S., Ex.")

Q. 58. Please look at exhibits marked "S and T," and state if you know what they are, and what they are for?

(Objected to as irrelevant and immaterial.)

A. They are two guides; they are for guiding the material to the fluting-rollers.

Q. 59. How long have you known those Exhibits S and T used for guiding the material to the fluting-rollers?

(Same objection.)

A. Since about 1864 and 1865.

Q. 60. If you can do so, describe what kind of fluting-rollers they were used with, and state, if you can, how they were used as guides?

(Same objection.)

A. With fluting like those on "Exhibit, Robjohn Machine." They were secured on a plate in front of the rollers. The material was passed through them and guided by hand to the guides. The Exhibits S and T are two separate guides, and are used separately.

Q. 61. State whether the fluting-rollers in "Exhibit, Robjohn Machine"

were the only shaped rollers the Exhibits S and T were used with; and if you know whether they were used with rollers shaped differently, please describe such rollers.

(Same objection.)

A. The rollers were like those in "Exhibit, Robjohn Machine,"
342 except broader or smaller meshes, and broader or smaller spaces were used. Finer or coarser fluting-meshes.

By spaces I mean the annular zones in the fluting-rollers wherein the smoothers are placed for producing flat borders on the material which is passed through the rollers.

Q. 62. State how the rollers were arranged with respect to each other, and the Exhibits S and T, which you call guides.

(Same objection.)

A. The fluting-rollers were placed one above the other, as in "Exhibit, Re-issue 3000," and the guides were in the same position in front of the rollers as in "Exhibit, Re-issue 3000."

Q. 63. Can you state the year when you saw the fluting-rollers placed one above the other as in "Exhibit, Re-issue 3000," and that the guides S and T were used in the same position in front of the rollers as in "Exhibit, Re-issue 3000?" If so, please state the year.

(Same objection.)

A. These guides S and T were not used in 1863. The guide S was used in 1865 or 1866, I think. The guide T was used about two years ago. I don't know exactly.

Q. 64. Can you state the year when you first saw the fluting rollers placed one above the other, as in "Exhibit, Re-issue 3000," and that guides like the guides S and T were used in the same position in front of the rollers, as in "Exhibit, Re-issue 3000?" If so, please state the year.

(Same objection.)

A. About 1862, perhaps before.

343 (The witness desires to correct his answer to question 25, by striking out all after the word "bar," beginning with the words "when the material," &c., and extending to the end of the answer.)

Cross-examined:

X. Q. 65. Are you the same person who is defendant in one of the suits, that of King vs. Werner, in which this testimony is being taken?

A. Yes.

X. 66. You say that in the "Exhibit, Re-issue 3000," the plain space in the rollers, "on the left hand, is a little smaller than the one on the right-hand side." Is that variation of those plain spaces material in the operation of the machine?

A. I believe that it is not material. I only described what I found in "Exhibit, Re-issue 3000;" at the same time I remarked that all the rows of puffing in "Exhibit, Re-issue 3001," were of the same breadth, so that they could not have been made at the same time on the machine described in "Exhibit, Re-issue 3000."

(All of the last sentence of the answer objected to as irresponsive and not called for by the question.)

Adjourned to 15th inst., at 11.30 a. m.

FRIDAY, *November 15th*, 1872.

Present, counsel as before.

Continuation of the testimony of Robert Werner.

X. 67. Did you ever see the two rings attached to "Exhibit,
344 Weitling Machine," and the several rings marked "Exhibit, Weit-

ling Rings," put and used upon the spindles of the Weitling machine?

A. I have seen rings on the Weitling machine and near the same, but I do not recollect any more in what position they were on the spindles.

X. 68. You can't say, then, that you ever saw those particular rings mentioned attached to the "Exhibit, Weitling Machine," and the several rings marked "Exhibit, Weitling Rings," that you ever saw those particular rings mentioned, used on the Weitling machine?

A. No, I can't say the identical rings were used.

X. 69. Did you ever see the rings now on the rollers, marked "Exhibit, Weitling Rollers," put, upon the spindles of the "Exhibit, Weitling Machine," before you put such rings on such spindles the other day, during your examination?

A. No, I saw some, but I don't know that they were the same.

X. 70. You tried the other day, did you not, the rings that are on the "Weitling Rollers" upon the spindles of the "Weitling Machine"?

A. Yes, in the presence of the gentlemen and during the examination, and at the request of counsel engaged.

X. 71. Does not the spring on the "Exhibit, Werner Machine," and which projects towards the rollers from the middle of the flat bar, produce or cause, as the machine is operated, an excess or greater quantity of material on the line of the breadth of the material between the narrow fluting rings, over what would be produced or gathered there if such spring was not used?

A. The said spring pressing on the material pulls back more or less material according to the distance from the fluting-rollers at which it is set.

The spring standing in front of the rollers must necessarily, by the action of the rollers drawing in material from both sides, cause a deflection, which must be formed in folds in the shape of a V.

345 The spring in connection with the rollers certainly gathers more material; the spring, however, would do the same without the rollers if the material was properly held on both sides by the fingers.

X. 72. The spring then does gather more material between the fluting rings than would be gathered or would be there if no spring was used, does it not?

A. Yes, it does, as described in my previous answer.

X. 73. Have you ever made any trimming for sale or use having the V-shaped folds, by drawing the stuff through beneath the pressure springs without the use of rollers?

A. No, I only wanted to explain the properties of the spring.

X. 74. Do you know of such pressure-spring ever having been used in making trimming without fluting rollers like those in "Exhibit, Werner Machine?"

A. No.

X. 75. To make on the "Exhibit, Werner Machine," trimming such as you have described with V-folds, as you call them, is it not necessary to use the pressure-spring?

A. Yes, it is necessary; I do not use anything else at present.

(All after the word "necessary" in the last answer objected to as irresponsive and not called for by the question.)

X. 76. Does not, in the "Werner Machine," the flat bar to which the pressure is fastened, in connection with the round bar standing back of the flat bar, constitute or make a guide to the cloth or material which passes under the spring and between the rollers?

A. No, it is not a guide in the proper sense of the word.

346 These two devices are there only for the purpose of taking out the irregularities in the material and smoothing the same. The guiding is done by the hand of the operator.

X. 77. When the hands are used to guide the material as referred to in your last answer they are held outside of the round bar shown on the "Exhibit, Werner Machine," are they not?

A. Yes.

X. 78. If the material to be passed through the Werner machine was wound upon a roller and that roller supported outside of the round bar referred to, would not the material then be guided into the machine by means of the flat bar, or the flat bar and round bar together?

A. No, I several times tried the experiment for the purpose of saving the hand, but I never succeeded properly, and believe also that it wouldn't work.

X. 79. How much material have you run through the Werner machine with the use of a roller placed as described in the last question?

A. Very little, because it would at once run either to one side or the other side.

X. 80. In the practical use of the Werner machine with the pressure-guide and with the use of the hands of the operator to guide the material, as you say, do you always make a trimming of uniform configuration, or does the shape of the central portion between the fluting rollers vary at times, and if so, how?

A. The pressure-spring does not always produce a uniform design; the configuration is more or less regular; it also depends on the material whether finer or coarser; whether more or less moist, or whether the machine is more or less hot, and whether the spring presses more or less on the material; and finally, whether the spring is at a greater or less distance from the fluting rollers.

347 X. 81. Does not, in the use of such machine, the shape or configuration of the central portion between the fluting rollers vary or differ at times?

A. It does vary, under the circumstances mentioned in my last answer.

X. 82. In the practical operation of a working machine, made like the "Exhibit, Werner Model," is not the article as delivered from such machine sometimes like, as to its central portion between the flutes of the trimming shown in "Exhibit, Re issue 3001," or almost exactly like that trimming, and having but very little, if any, of the V-shape form you refer to?

A. No, it's always the predominating form of a V.

X. 83. Have you not informed M'r Kursheedt, the complainant's solicitor in this case, that your machine, the Werner machine, produced at different times, trimmings differing materially in appearance as regards the central part between the rows of fluting?

(Objected to on the ground that the question is not specific enough as to time and circumstances.)

A. I do not recollect especially to have said so, but I do recollect that in one of M'r Kursheedt's questions I gave the explanations which I have given in answer to question 80.

X. 84. Have you not stated to M'r Kursheedt, since the 1st of October, and in this room, substantially as inquired of in the last question?

(Defendant's counsel asks the counsel for the complainant what his object is in asking this question, whether it is asked for the purpose of laying the predicate of impeaching the veracity of the witness.

Complainant's counsel states that his object is to find out what the witness will say in answer to the question.

348 Question objected to by defendant's counsel, as if competent for any purpose it is only so for the purpose of attempting to impeach the veracity of the witness, and as the counsel for the complainant declines to say that he asks the questions for that purpose, it is wholly inadmissible, and he asks that the question and the answer, whatever it may be, may be stricken out.

Defendant's counsel inquires whether complainant's counsel refers to private conversations the witness had with M'r Kursheedt and not to anything that took place on the former conversation.

Counsel for complainant says he refers to private conversations between the witness and M'r Kursheedt.)

A. I have no particular recollection as to what I have said. I may have said that the machine at different times produces different forms, being of more or less V shape, under the condition stated in my answer to question 80.

X. 85. Look at the piece of trimming shown you now and state whether that was made on the Werner machine, and whether you have made and sold trimmings to some extent, like trimming shown you and made on the Werner machine.

(Defendant's counsel objects to the question and to the same inquired about, on the ground that it is not covered by the allegation in complainant's bill in any of these cases; that complainant's bill in none of these cases mentions the sample referred to, nor anything like it;

349 nor are any of the defendants in the several bills of complaint charged with having manufactured or used such sample or anything like it; nor with having infringed complainant's patent in that respect, and on the ground further that the question is indefinite in point of time, not pointing to the time before the institution of these suits.)

A. I can't tell with certainty whether I have made this piece of trimming. I have made such trimmings and I do see on the surface of the folds in the centre the impression made by the pressure-spring, and I declare that if it had not been stretched too much sideways, that then, also, the folds in the centre would be more V-shape than of any other form. As I have previously stated, much depends on the material; the thicker the material the larger will be the folds.

(The trimming shown witness is put in evidence by complainant's counsel, and is marked "Complainant's Exhibit, Werner Alpaca Trimmings, Nov. 15th, 1872. R. E. S., Ex."

Defendant's counsel objects to the admission of the same in evidence, upon the ground: first, that it has not been proved to have been made by the witness, Werner; and secondly, on the ground that it has not been proved to have been made by anybody before the commencement of these suits, and its admission is improper for those reasons; also objects to its being called "Exhibit, Werner Alpaca.")

Adjourned to 18th inst., at 11 a. m.

350 MONDAY, *Monday* 18*th*, 1872.

Present, counsel as before.

Continuation of the testimony of Robert Werner:

M'r A. Faber du Faur, the interpreter, being unable, by private engagements, to proceed further with the case, M'r Antoine C. Crandal is,

by consent of the parties to the suit, substituted in place of M'r Faber, and having been duly sworn as interpreter, the further examination of the witness is proceeded with.

X. 86. You say you made the Exhibits J, K, and M, on a fluting-machine. On what particular machine, if any, did you make them? Specify where and when.

A. I made them on my machine without a pressure-spring, in the month of September, 1872, in No. 108 Chamber street, New York.

X. 87. Do you believe that the Exhibits L, N, and O were also made by you at the same time you made the Exhibits J, K, M?

A. I don't believe that I made them because the stripes have been cut in two since they were made. I can't say I made them. Maybe I made them and maybe not.

X. 88. On that machine of yours on which you made the Exhibits J, K and M, and which had no pressure-spring upon it, was what you call the raiser behind the rollers, on such machine when you made those exhibits?

A. No; the raiser was screwed off.

X. 89. How much trimming did you make on that machine at that time, when you took off the pressure-spring and the raiser?

351 A. Several yards; between three and four yards.

X. 90. How did you give to that piece of trimming which you so made with that machine, and which had no pressure-spring or raiser upon it, the fullness which is between the fluted rows as seen in said exhibit; by your hands or by some mechanism to take the place of the pressure-spring?

A. By the hands.

X. 91. Did you make that strip of three or four yards all in one piece, or were there several pieces? If so, how many and how long was each piece?

A. I made it in separate pieces, about three of them, each one or one and a quarter yards long.

X. 92. Did you cut those pieces you made in short pieces lake Exhibit J, K, and M?

A. No.

X. 93. Who did it, if you know?

A. I have not seen it. I don't know.

X. 94. Previous to the time when you made those three pieces of trimming on your machine, had you used your machine for making trimming without the pressure-spring and without the raiser attached to it?

A. I had made experiments.

X. 95. Had you ever used your machine without the pressure-spring and the raiser for making trimming for sale?

A. No.

X. 96. How much trimming could you make with your machine, using it without the pressure-spring and the raiser, and giving fullness with your hands, as you have stated, in a working-day?

A. I can't state exactly. I think I could make some hundred yards.

X. 97. In making trimming like the Exhibits J, K, and M, on your machine, without the pressure-spring and the raiser, and using your hands as you have described, would all the trimming which you should so make during a day be uniform in construction and appearance?

352 A. They would be more or less uniform in construction and appearance, according to the attention paid to the work.

X. 98. You don't think, do you, that trimmings so made would be entirely uniform in construction and appearance, do you?

A. I can't say exactly.

X. 99. Do you think that all the trimmings so made by any person for a whole day would be as uniform in construction and appearance as if it was made by mechanism alone?

A. That depends upon the person who puts the stuff into the machine.

X. 100. In the working of such machine in the manner you have described, the operator guiding the cloth by his hands, and giving by his hands the fullness between the rows of fluting, could he make two or three parallel rows of such trimming at one and the same time?

A. One and two rows can be made at the same time and from the one piece of cloth by the same man.

X. 101. When you made the three pieces you have referred to in September, 1872, did you make each piece or strip separately, or make two at once and at the same time?

A. I made them separate.

X. 102. Did you ever make on your machine two strips or rows of trimming at the same time, when the machine was arranged and operated as it was at the time you made those three strips or pieces in September, 1872?

A. Yes, by experiments, some time before that.

X. 103. How long before that time?

A. I don't recollect exactly. It may be a year or a year and a half previous. I made some last summer.

X. 104. Have you any specimens of such two rows made by you at one and the same time?

353 A. I don't think that I have. Maybe I have, though I can at any time make some.

X. 105. When you made the three pieces in September, 1872, as you have said, was each one of those pieces, in its whole length, uniform in construction and appearance, and delivered from the machine in a straight condition, so as to be suitable for use as a trimming upon an article of ladies' dress?

A. Each of those pieces was as uniform in construction and appearance as possible, and delivered from the machine in a straight condition, suitable for use as a trimming on an article of ladies' dress, when stitched and trimmed for that purpose.

X. 106. What do you mean in your last answer by the words "as possible," in the expression "as uniform in construction and appearance as possible?

A. According to how the machine will do the work.

X. 107. Were the pieces of trimming marked "Defendant's exhibit J, K, and M" cut from the ends of the three pieces of trimming made by you on your machine, as you have stated, in September, 1872? And state how you know such exhibits to be a part of what you made at that time.

A. Yes; they are cut therefrom. I identify them by the marks made thereon by the persons who were present when the three pieces were made in September, 1872. The marks I refer to are the small ink marks on the pieces of trimming referred to.

X. 108. In the Exhibit J the trimming seems to bend or curve toward the right, and in the Exhibit K the trimming seems to curve or bend toward the left; was such curve or bend in those trimmings made as those pieces were passing through the machine?

A. There is nothing done to those pieces since they left the machine.

The curving or bending must have been produced by some carelessness in handling them after that time.

354 X. 109. Then those Exhibits J and K are not in the condition they were when they left the machine. Do you mean to be so understood?

A. Yes; I have seen how many times they have been handled during this examination.

X. 110. Then those exhibits are not now in the same shape and with the same appearance they were when they left the machine? Answer whether they are or not.

A. They are, except the necessary consequence of handling.

X. 111. Where are the other portions of those three pieces made by you in September, 1872, from which the Exhibit J, K, and M were cut?

A. I don't know where they are.

X. 112. When you made those three pieces of a yard or a yard and a quarter long each, in September, 1872, what did you do with them?

A. We cut off those ends which are the exhibits and sewed the other parts together and gave them to Mr. Dorsey. If I had known they were to be used as exhibits, I would have used more care in making and preserving them.

(All of the last sentence of the answer objected to as irresponsive and not called for by the question.

Counsel for complainant calls for the production by the witness, or by Mr. Dorsey, of the pieces of trimming from which the Exhibits J, K, and M were cut, and calls for their production in the same condition they were delivered from the machine in September, 1872.)

X. 113. Are you the same person to whom the patent marked "Exhibit, Werner Patent" was granted?

355 A. I am.

X. 114. Have you a patent for a machine for making the trimming described in the patent "Exhibit Werner Patent?"

A. I have a caveat, and the patent is applied for.

(Counsel for complainant calls for a copy of such caveat and such application.)

X. 115. You say in your answer to the 39th question that the office of the guide described in "Exhibit, Re-issue 3000" is to guide the material passing freely through it to the fluting-rollers; is that the only office of that guide?

A. The office of such guide is also to keep the material up in the middle. I know of no other office of this guide.

X. 116. What is the office of the guides you have referred to as being in the "Exhibit, Robjohn Patent?"

A. The office of these guides is to turn down a straight strip of material on both sides and lead the material to the fluting-rollers.

X. 117. Is not Robjohn's patent a patent for making a two-ply ruffle or a ruffle of two thicknesses of material?

A. So it is.

X. 118. And the office of the guides is to take one thickness of cloth and fold over its edges, so that when it passes through the machine it will be in two thicknesses, is it not?

A. Yes.

X. 119. In the Robjohn machine, as described in his patent, the cylinders are fluted entirely across their length, except where the pieces D, shown in sheet 2, attached to the "Exhibit, Robjohn Patent," act, are they not?

A. Yes.

X. 120. In the cylinders used in the Robjohn machine are there
356 any plain open spaces without flutes corresponding to the spaces marked "C" on the first sheet of drawings attached to King's patent. "Exhibit, Re-issue 3000?"

A. No, there is not.

Adjourned to the 19th inst., at 11.30 a. m.

TUESDAY, *November 19th*, 1872.

Present, counsel as before.

Continuation of the testimony of Robert Werner.

X. 121. How do you fix the time, 1863, when you first saw the "Exhibit, Weitling Machine?"

A. By the fact that I made a button-hole machine for W'm Aufermann and W'm Weitling in that year, 1863. The button-hole machine was the invention of W'm Weitling.

X. 122. How do you know it was in 1863 that you made that button-hole machine; do you fix that time from memory, or how?

A. I fix the time by memory.

X. 123. Where, in what particular place—give the street and number—did you first see the "Exhibit, Weitling Machine?"

A. I saw first the said machine in Avenue A, in a baker's house, about three or four houses from the corner of 7th street—bread baker's house—opposite a large park. The number I do not recollect.

X. 124. Was it at M'r Weitling's house that you saw that machine then?

A. M'r Weitling lived in that house. I do not know if it belonged to him.

X. 125. Was it in M'r Weitling's apartments or rooms you saw that machine?

A. Yes.

357 X. 126. How long was you there at that time?

A. I don't remember exactly the time; it may be an hour, more or less.

X. 127. On what business or for what purpose were you there at that time?

A. I was there with M'r Auferman, to look at a working model machine on which M'r Weitling had operated, for the purpose of constructing thereafter another and a larger one, with such improvements as M'r Weitling described to me.

X. 128. What was the machine which you went to see?

A. A button-hole machine.

X. 129. What time in the year was it you went there, the spring or what time?

A. I think about the month of June.

X. 130. Do you fix that month of June from memory, or how?

A. By memory.

X. 131. At that time that you so saw the Weitling machine there, was such Weitling machine in use or being used?

A. I have not seen the machine in use. It was standing on a bureau, so far as I can recollect.

X. 132. Can you tell how many and what kind of rings, if any, there were on the spindles of that machine at that time?

A. I cannot say how many rings there were on those spindles, but I remember to have seen some rings, of which some had a flat appearance.

X. 133. Was that machine which you say was on the bureau, you think, standing alone or by itself?

A. There were several other things standing about on the bureau. M'r Weitling showed me several rings, which I think were on the bureau, and from the bureau drawer, some ribbons and fluted goods.

358 X. 134. When next, after you saw that Weitling machine on the bureau in Avenue A, did you see it again and where?

Ans. I saw the machine afterwards several times casually when I came to M'r Weitling to have an understanding with him about the button-hole machine. The time I cannot fix. When this suit was first talked about I remembered this machine, and went to M'r's Weitling, who showed the same to me again.

X. 135. You say the machine described in "Exhibit, Re-issue 3000" will make the same impressions on such articles as tin-foil as upon linen or muslin; have you ever seen such machine worked with tin-foil?

A. I have not seen such a machine worked with tin-foil, but I have made the experiment on my own rollers and produced similar impressions as on linen and muslin, according to the nature of the stuff.

(All of the answer after the words "tin-foil" objected to as irresponsive and not called for by the question.)

X. 136. You say the machine shown in "Exhibit, Robjohn Patent," can be used for making puffing like "Exhibit, Puffing of 1866," did you ever know of the Robjohn machine being used for making such kind of puffing before Oct., 1866?

A. No.

X. 137. Are there any kind of machines used for giving different shapes or designs to cloth, or paper, or other material, which are known as embossing-machines?

A. There are such machines.

X. 138. When such machines use two rollers, state how such rollers are made, whether the same shape or design is not cut on each roller, one roller being what may be called a male die and the other a female die.

A. Yes, they are cut to correspond; one is called matrice, and
359 the other patrice. Sometimes there is used but one matrice roller together with a smooth roller, for the purpose of saving the patrice roller; in such case the material is put on a soft stuff, for instance felt, which runs between the rollers with it, this is mainly the practice in working paper for making trimmings of gold paper, used for ornaments on paper boxes and other similar goods.

X. 139. Did you make the machine "Exhibit, Robjohn Machine," and the guides "Exhibit, Robjohn Guides?"

A. I bought the machine and the guides second-handed, about three or four weeks ago. The guides I have screwed on the machines in accordance with Robjohn's patent. On the 28th day of October last I paid for it.

X. 140. For what machine are the guides S and T made?

A. The small one, S, I made in Mr. A. Hecht's shop, for a fluting-machine, in 1865, or the beginning of 1866. The other one, T, I made for a fluting-machine myself, about two years ago.

X. 141. For what kind of a fluting-machine were those guides made; your machine like "Exhibit, Werner Machine," or what?

A. For a fluting-machine with breakers, to manufacture fluted ruches with flat borders.

X. 142. Have you ever made with your machine, when the pressure-foot and the raiser were removed from it, trimmings or puffings in the way you made those three pieces in September, 1872, for a whole day

continuously, or to the extent of two or three hundred yards, at any one time?

A. No; I only made experiments.

X. 143. You estimate that you could make some hundred yards of such trimming in that way during a working-day; is that matter of opinion on your part, or derived from actual trial?

360 A. It is an opinion formed from the minor experiments I have made.

X. 144. When you made the small guide, Exhibit S, in M'r Hecht's shop, were you working for Mr. Hecht?

A. I was in the employ of Mr. Hecht.

X. 145. Were you in the employ of M'r Hecht in 1868 and 1869 and 1870?

A. Yes; up to the month of July, 1870. I had an arrangement with Mr. Hecht for the last two or three years I was with him; he let me make goods on my own account in his shop, and I paid no rent, and I kept his machines in order as an equivalent for the rent.

X. 146. M'r Hecht, during the time you were with him, was sued by M'r King, was he not, for the infringement of the patents "Exhibits, Re-issue 3000 and 3001," or one of them?

A. I heard about such infringement-suit against M'r Mandlebaum, but not against M'r Hecht.

X. 147. M'r Hecht made the goods M'r Mandlebaum sold, and which were claimed to infringe such patents, did he not?

A. I think it was so.

X. 148. You knew M'r Mandlebaum at the time M'r Hecht was making such goods, did you not?

A. Yes; I saw him several times in M'r Hecht's place.

X. 149. Did you tell M'r Hecht or M'r Mandlebaum anything about this Weitling machine, which you say you saw in 1863?

A. No; those gentlemen never spoke about the infringement-suit, and when I questioned them they avoided answering me.

(All of the answer after the word "No" objected to as irresponsive.)

361 X. 150. Look at the piece of trimming now shown you, and state whether you made such piece of trimming on your machine, or have made trimming like that piece on your machine.

A. Yes; I have made such piece on my machine. I believe I made this piece. I see the mark of the pressure-spring in front, and of the raiser on the back.

(The piece of trimming referred to in the last answer is put in evidence by complainant's counsel, and is marked "Complainant's Exhibit, Card of Alpaca Trimming," November 19th, 1872.

Defendant's counsel objects to the introduction of this last exhibit on the ground that it does not appear that the same was made by the witness before the institution of the suit of the complainant against Robert Werner was commenced, and that the same cannot be made evidence in this cause; and he further objects to the same being used as evidence against Hermann and Lautenbach or Alexander Lyle.)

X. 151. Did you make trimming like this piece last shown you on your machine before the 1st of March, 1872?

A. No.

X. 152. When first did you make any trimming like this piece last shown you?

A. In the last part of September and the first part of October, 1872.

X. 153. When you made on your machine trimming like the last piece

shown you, was your machine arranged in the same manner, and using the pressure-foot and the raiser, as when you made the puffing shown in Exhibits "Hermann and Lautenbach," and "Lyle?"

A. When I made the trimming, Exhibits "Hermann and Lau-
362 tenbach," and "Lyle," the machine was not arranged as when I made the "Exhibit, Card Alpaca Trimming." In making the first ones I am not sure that I had the raiser on it, but the protuberances I did not have. Those are improvements of the last year.

Adjourned to 20th inst., at 10.30 a. m.

WEDNESDAY, *Nov. 20th*, 1872.

Present, counsel as before.

Continuation of the testimony of Robert Werner.

X. 154. When, during the last year, did you make the improvements of the protuberances on your machine, placed behind the rollers and over the fluted rings? Mention the time as exactly as possible.

A. I think it is about two years since I conceived the first idea about this improvement and worked on it, but it was not put in practical use until about a year ago. In M'r Hecht's shop I made a similar arrangement of brass on a fluting-machine for ruches, and there it was in use for a long space of time.

X. 155. Since the time you put that into practical use, about a year ago as you say, have you continued to use it on your machine?

A. Yes.

X. 156. Have you any memorandums or data from which you can fix the exact time, or nearly the exact time, when you first made alpaca trimming like the small piece marked "Exhibit, Werner Alpaca Trimming," and like the large piece marked "Card Alpaca Trimming?" I mean of the same configuration, with fluted edges and a puffed center.

A. I had, about the latter half part of September, 1872, commenced to make experiments, and I think in the last days of said month and the commencement of October I made the goods. The angle-
363 formed folds between the flutes are not always the same. This is according to the circumstances which I have mentioned in answer to question 80. I can show other pieces which were made at the same time, and differ from the peculiar shape of these samples, though they always show a V shape more or less regular. There are memoranda in my books.

X. 157. Before you commenced making experiments on alpaca, as you state in your last answer, had you seen, or been shown, any article of trimming made in alpaca similar to or generally resembling the exhibits referred to in the last question?

(Objected to as irrelevant and immaterial.)

A. No; I have not seen any, but I have heard about them. I can prove that I have last year made similar specimens for myself, and have shown the same to Mess. Hermann and Lautenbach.

X. 158. What time last year did you make such pieces and showed them to Hermann and Lautenbach? Fix the time as exactly as possible.

A. Some time during the dull season of 1871; summer time, in July or August.

Redirect:

Q. 159. In cross-question 151 you were asked, "Did you make trimming like this piece last shown you, on your machine, before the 7th of March, 1872?" to which you answered, "No." In your answer to cross-question 157 you say, "I can prove that I have last year made similar

specimens for myself and have shown the same to Mess. Hermann and Lautenbach." Explain what you mean by your answers as above quoted to those two questions.

(Objected to as improper on redirect.)

364 A. I have not made any like the exhibits referred to before the 7th of March, 1872. The samples which I refer to in my answer to question 157 were all of colored stuff; of merino or other similar woolen material; they were short pieces, not over a half a yard long, and there was no lining under; they were made exactly as I made lawn trimming.

Q. 160. Do I understand you to say now that you did not make any trimming like the two exhibits referred to previous to the 7th of March, 1872?

(Objected to as leading.)

A. I did not make any previous to that date.

Q. 161. In your answer to cross question 156, in which question you were asked, "Have you any memorandums or data by which you can fix the exact time when you first made alpaca trimming like the exhibits referred to?" and in your answer you say, "I have, about the latter half of September, 1872;" are you able to state with certainty that that is about the time you commenced to make experiments in alpaca trimming?

(Objected to as improper on redirect.)

A. Yes; that was the time I commenced the experiments.

Q. 162. Look at "Exhibit, Werner Alpaca," and state whether or not as that exhibit now appears the centre part thereof between the rows of flutes is in the shape that it had when it first came out of the machine, or whether there is any change in it, and, if so, state what the change is; in other words, describe how it looked when it first came out of the machine, and, if there is any change in its appearance, state what may have occasioned such change.

A. By examining this exhibit, I perceive that it has not now the same shape as at the time it came from the machine; by much hand-
365 ling it is stretched out and flattened. When it came from the machine, the centre folds were more compact and elevated and were nearer to the regular form of a V.

Q. 163. Can you say the same of "Exhibit, Card Alpaca Puffing," or any part thereof?

A. Some parts of it appears as it came from the machine, and some not.

Q. 164. State whether or not trimming of that kind is apt to lose its shape by handling or other usage.

(Objected to as immaterial.)

A. Yes; so it does; even damp air or the influence of damp places will put it out of shape.

Q. 165. In your opinion, will the machine described in "Exhibit, Re-issue 3000" make alpaca trimming like "Exhibits, Werner Alpaca" and "Cord Alpaca" or "Exhibit, Piped Alpaca Futed Puffing?"

(Objected to as irrelevant and immaterial.)

A. In my opinion, the machine, as presented in "Exhibit, Re-issue 3000," cannot make trimming like the three exhibits, and I defy any man to produce such trimming with a machine constructed like the drawing; but a machine can make trimming like "Exhibit, Piped Alpaca," when changed so that the upper roller in the flat zone, opposite the arched guide, is at the periphery deepened out, either in a circular, parabolic, or a hyperbolic shape; the roller being shaped in such

manner, the material elevated by the arched guide will be pressed together by the roller, and, the periphery of the roller making greater space in rotating than the smaller parabolic centre zone, there will be produced a friction on the material, which is held back and receives a shape like "Exhibit, Piped Alpaca."

It has not the arched guide, but the parabolic zone in the roller, through its action on the material, which produces the pe-
366 culiar shape in "Exhibit, Piped Alpaca" that never could be produced by the action of the zone C C as is represented, "Exhibit, Re-issue 3000."

(Complainant's counsel objects to all of said answer after the words "constructed like the drawing" as irresponsive and not called for by the question.)

Q. 166. Is it your opinion that the machine which made "Exhibit, Piped Alpaca" was not constructed like the machine described in "Exhibit, Re-issue 3000?"

(Objected to as new matter and improper on redirect examination, and as irrelevant and immaterial.)

A. It's my opinion that the machine on which said exhibit was made was not constructed in accordance with the drawing in "Exhibit, Re-issue 3000."

Q. 167. Did the complainant show you one of his machines on which he is now making his flated puffing? If so, when and under what circumstances?

(Same objection.)

A. Yes; he did show me one of his machines about two months ago, when I was with M'r Gilchrist and M'r Dorsey, in Kursheedt and King's business, and once again about five weeks ago, when I was there with M'r E. S. Renwick. I went to see the machine in consequence of a covenant stipulated between the counsel on both sides in these cases.

Q. 168. Was the machine that was shown you on those occasions in construction like the machine described in "Exhibit, Re-issue 3000?" If not, state the difference.

(Same objection.)

367 A. It was not. The difference was, to my best recollection, that the rollers in those machines, in the flat zones opposite the arched guides, were deepened out at the periphery, like I have described in my answer to question 165.

Q. 169. In answer to cross-question 86 you said, "I made them (speaking of Exhibits J, K, and M) on my machine, without a pressure-spring. What is the difference, if any, between that machine without the pressure-spring and the machine described in "Exhibit, Re-issue 3000," without the arched guide?

(Same objection.)

A. The only difference is in the dimensions.

Q. 170. In making the piece of trimming spoken of in your answer to cross-questions 89 and 90, and which you say you made by the hands, state whether or not you used your hand in any manner different from the manner in which the material is usually fed to the fluting-rollers, or state how you used your hands.

(Same objection.)

A. I did not use my hands in any other way than is usual to lead the material to the fluting rollers.

Q. 171. In answer to cross-question 131 you say, "I have not seen it in use; it was standing on a bureau," as far as I recollect; and in answer to cross-question 133 you say there were several other things around on

the bureau; state what constituted the machine at the time you then saw it, of what was it constructed, and what were the other things you say you saw on the bureau.

(Same objection.)

A. The machine stood on a bureau, on a frame with standards, and a roller, just like the "Exhibit, Weitling Machine," and "Exhibit, Weitling Board," and "Exhibit, Weitling Bar," which are now before
368 me. The *the* other things on the bureau I do not distinctly remember, though I am sure I saw some little boxes and some spindles with rings.

Q. 172. When you spoke about seeing the machine in the question above referred to, what did you mean to include in the word "machine?"

(Same objection.)

A. I include every part appertaining to it when I use the word "machine"—the board, the standard, the bar, and the spindles.

Q. 173. You were asked, in the course of the cross-examination, whether you had ever made stripes of puffing by feeding the material to the rollers with your hands alone, without the use of an arched guide on the pressure-spring; have you any long stripes of puffing so made with you?

(Same objection.)

A. Yes; I have such samples with me, and produce them.

(Defendant's counsel offers the stripes referred to in evidence, and the same are by the witness marked "Werner Strips, Nov. 20th, 1872, R. E. S., Ex."

Complainant's counsel objects to the admission of same in evidence on the ground that the same are inadmissible at this stage of the examination.)

Q. 174. In answer to cross-question 134 you say, "I saw the machine casually afterwards several times, when I came to M'r Weitling to have an understanding with him, &c.;" were or were not the board and standard and bar attached to the machine at those times?

(Same objection as to question 166.)

A. Yes, the machine was always like as I see it now in the "Ex-
369 hibits, Weitling Machine," "Weitling Board," "Weitling Bar," "Weitling Standard," and "Weitling Spindles." It was not the same bar as the "Exhibit, Weitling Bar," as that "Exhibit, Weitling Bar," is a new one; but it was like it.

Q. 175. In part of your answer to said question 134, you state, "When this suit was first talked about, I remem'cred this machine, and I went to M'r's Weitling, who showed the same to me again." Why did you go to M'r's Weitling at that time?

(Same objection.)

A. Because it came in my mind that this machine was very much like M'r King's patented machine in question.

Adjourned to the 21st inst., at 10.30 a. m.

THURSDAY, *November 21st*, 1872.

Present, counsel as before.

Continuation of the testimony of Robert Werner:

Q. 176. In your answer to question 138, you describe how the rollers of an embossing-machine were constructed and what they were called. State whether or not the rollers of the King machine, described in "Exhibit, Re-issue 3000," can be considered as embossing-rollers, and whether the work done by them can be considered as embossed work.

(Same objection.)

A. Yes, the fluting-rollers in the machine described in "Exhibit, Re-issue 3000," are so far embossing-rollers as every fluting-machine is an embossing-machine, because it always produces raised or elevated
370 or so-called embossed work. The immediate effect of the fluting meshes in the machine "Exhibit, Re-issue 3000," is the production of puffing or raised embossed work.

Q. 177. What would be the effect of running a piece of muslin or other fabric through the arched guide and rollers of the machine described in "Exhibit, Re-issue 3000," without any starch or sizing or anything being used to stiffen the material? Would they leave any shape or design upon the material?

(Same objection.)

A. When the material is without starch or stiffening of any kind, then the machine described in "Exhibit, Re-issue 3000," its fluting-rollers, with arched guide, would not leave any lasting configuration or shape thereon; they would leave the flutes and puffing in a very loose shape, which the least handling would turn into a worthless article that could not be called puffing.

The further examination of this witness suspended.

ERNST KÖRBEL, being duly sworn as a witness on part of defendants, deposes and says as follows:

The witness swearing that he is imperfectly acquainted with the English language, and requesting an interpreter, by request of defendants' counsel, complainant's counsel objecting, M'r Anton C. Crondal is sworn as interpreter, and translates the testimony of the witness as follows:

Q. 1. What is your name, age, residence, and occupation?

A. Ernst Körbel; 49 years old; residence, 610 E. 11th street, New York; occupation, machinist.

Q. 2. Were you or not acquainted with M'r Weitling, deceased?
371 If so, state when you were first acquainted with him, and how long you knew him.

A. I was. In May or June, 1863, I knew him, and saw him often, until the time he died.

Q. 3. Look at exhibits "Weitling Machine," "Weitling Board," "Weitling Standard," and "Weitling Rollers," and "Weitling Rings," and state whether you ever saw them before; and if so, when and where?

A. Yes, I have seen them before, in M'r Weitling's house, in avenue A, in May or June, 1863.

Q. 4. Did any person show you those exhibits? And if so, state who.

A. M'r Weitling himself showed them to me.

Q. 5. Did he say anything to you, or do anything at the time he showed you those exhibits?

(Objected to as calling for statements made by Weitling.)

A. M'r Weitling showed the machine to M'r Werner and myself, and he turned the machine, but did not produce anything on it.

Q. Was there any person present besides M'r Werner and yourself and M'r Weitling at the time you now speak of?

A. Yes; M'r Aufermann.

Q. 7. Please state what positions, as nearly as you can describe it, those exhibits were in.

(Objected to, on the ground that the witness is incompetent to testify as to any prior invention or use of any machine or article claimed to

antedate the inventions described in "Exhibits, Re-issue 3000 and 3001," as he is not named in either of the answers herein.)

A. Yes; it was like I see them now.

Q. 8. Look at "Exhibit, Weitling Bar," and state whether you ever saw a bar like that before.

(Same objection.)

372 A. Yes; I have seen a similar one.

Q. 9. State when and where you saw it, and how it was situated or located.

(Same objection.)

A. I saw it at the same time and place I saw the machine. It was placed in this frame, "Exhibit, Weitling Board."

Q. 10. Put the "Exhibit, Weitling Bar," in the place that you saw it at the time you speak of.

(Same objection.)

A. I have done so.

Q. 11. State in what holes in the standards you have now put "Exhibit, Weitling Bar."

A. In the front holes; I call the front the part nearest the machine.

Q. 12. Did you ever see an article similar to "Exhibit, Weitling Fluting, No. 2," before? And if yea, state when and where you saw it.

A. I have seen similar samples like this at Weitling's, at the same time he showed us the machine.

(Defendants' counsel requests the examiner to mark for identification the two articles of trimming marked "B," attached to affidavit of Caroline Weitling, dated January 8th, 1872, and the same are now marked "Weitling Trimming, Nov. 21st, 1872, R. E. S., Ex.;" and also seven samples of fancy trimming, which are marked "Weitling Ribbons, Nov. 21st, 1872, R. E. S., Ex.")

Q. 13. State whether or not you recollect whether the iron part of the machine, at the time you saw it, was fastened to the board in any way; and if you recollect, state how it was fastened, if fastened at all.

373 (Same objection.)

A. Yes, it was fastened. If not, he could not have turned the machine. It was fastened with screws.

Q. 14. You do not appear to have answered question No. 5 fully. I asked you, did he say anything to you, at the time he showed you the "Exhibits, Weitling Machine," &c.; please answer that part of the question now.

(Same objection.)

A. He explained how the stuff is worked on the machine; what different patterns can be worked on it; how the rings are fastened and taken down, &c.

(Objected to as irresponsive, and as volunteered by the witness, and as the witness is incompetent to testify to the statements of W'm Weitling, as such testimony is mere hearsay.)

Q. 15. Look at exhibits, "Weitling Ribbons" and "Weitling Trimmings," and state whether you have ever seen trimmings similar to those before; and if yea, state when and where.

(Same objection, and as immaterial.)

A. Yes; I have seen them at the same time when M'r Weitling showed me the machine; he took such samples out of a box in the bureau-drawer.

Q. Do you recollect whether M'r Weitling said anything to you at

the time he showed you those samples? If so, state, as near as you can recollect, what he said.

(Same objection, and also to latter part of question as calling for statements made by Weitling, and thus mere hearsay.)

374 A. I don't recollect that he said more than that he could make such samples of different materials and different patterns.

Q. 17. State whether or not you recollect that M'r Weitling said anything to you at the time you say that you saw similar samples to those marked "Exhibit, Weitling Puffing, No. 2," in regard to similar samples?

(Same objections, and also as leading.)

A. He showed us several similar samples, and said he could make such ones.

Q. 18. Was he or not speaking of his machine "Exhibit, Weitling Machine," at the same time?

(Same objection.)

A. Yes, he spoke about the machine "Exhibit, Weitling's Machine," in showing us the samples.

Q. 19. State what samples he then showed you.

(Same objection.)

A. Exhibits "Weitling Ribbons" and similar ones to exhibits, "Weitling Puffing, No. 2," and "Weitling Trimming," and several other different patterns, which were in the same box in the bureau-drawer.

Q. 20. Did you or not see M'r Weitling after the time you have mentioned in 1863?

A. Yes, I saw him after that time.

Q. 21. Did you or not see the machine "Exhibit, Weitling Machine," after the time you have mentioned in 1863?

A. No.

Cross-examined:

X. 22. How long have you lived in this city?

A. So long as I am in this country, more than 16 years, except eleven months, of which I spent eight in S't Louis.

375 X. 23. Where do you do business?

A. I have my own shop, in 610 11th street, where I live. I repair sewing-machines.

X. 24. How long have you lived there?

A. Since May last.

X. 25. How long have you known M'r Werner, defendant in one of these suits?

A. Since the spring of 1863.

X. 26. Have you ever done any work for him?

A. No; except to help him in making a button-hole machine for M'r Aufermann.

X. 27. How long is it since you have seen M'r's Weitling, the widow of W'm Weitling?

A. I can't determine the time. It was several years ago, when they then kept a store in Houston street, for making button-holes for tailors.

X. 28. How long were you engaged in working on the botton-hole machine with Mr. Werner?

A. I can't say exactly; it may be two months.

X. 29. Have you been engaged in any occupation except in making and repairing sewing-machines since you came to this country?

A. Yes; I have been a locksmith, and have worked on safes and safe-locks for Day and Newell, in Mercer street.

Adjourned to 22d inst., at 1 p. m.

376 FRIDAY, *November 22d*, 1872.

Present, counsel as before.

Continuation of the cross-examination of M'r Körbel:

X. 30. When, if you know, did M'r Weitling die?

A. I don't *know*.

X. 31. How long were you acquainted with M'r Weitling?

A. I know him since May or June, 1863, for several years. Have been in his store in Houston street, but cannot fix the time.

X. 32. When you saw M'r Weitling first, was it at the time you went to his house at avenue A with M'r Werner, as you have testified?

A. Yes, it was.

X. 33. How long were you at his house at that time?

A. About an hour.

X. 34. Were you helping build the button-hole machine that you went there to see about?

A. I was helping M'r Werner build the button-hole machine, and he took me there to look at that machine.

X. 35. Did you and M'r Werner go to M'r Weitling to get some instructions about the botton-hole machine, or for what purpose?

A. We went there to look at a button-hole machine, for the purpose that M'r Werner could get an idea how to make a new one.

X. 36. Had M'r Werner done anything towards making a button-hole machine for M'r Weitling before he went there?

A. I cannot tell.

X. 37. Did you or M'r Werner take along with you when you went to M'r Weitling's at that time any machine or any part of a machine?

A. No.

377 X. 38. Did you see the *h*utton-hole machine which you went there to look at?

A. Yes.

X. 39. Had you been making button-hole machines of any kind before you went there to see that?

A. No.

X. 40. Did you and M'r Werner carefully examine that button-hole machine, which you went to see, as to its several parts, while you were there?

A. Yes, we did.

X. 41. Had you ever seen a button-hole machine before like that?

A. No.

X. 41½. Was that button-hole machine which you saw there a machine having a good many separate pieces or parts?

A. Yes, it was.

X. 42. Was it a machine which you should call a complex machine; rather a difficult machine to make?

A. Yes, it was.

X. 43. Did you examine it so that you was able to understand how it was constructed and how it worked?

A. Yes.

X. 44. How long were you engaged in examining that machine, so as to understand it?

A. About an hour.

X. 45. How many other machines, of any and all kinds, were there in that room of M'r Weitling's, where you saw and examined the button-hole machine?

A. There was one other machine, which I saw here yesterday.

X. 46. Are you certain that was the only one besides the button-hole machine?

A. I did not see any other, and M'r Weitling did not show us any other.

X. 47. In what room were those machines; in the common living-room, or what?

378 A. We went through the kitchen to the room in which the two machines were; next to it was a bed-room.

X. 48. What other things were there in that room besides those machines?

A. The ordinary furniture that is in a room—chairs and a bureau and a lounge—as far as I recol'ect.

X. 49. What was M'r Weitling's business at that time, if you know?

A. As far as I know, he was an inventor of machines. He did not have any regular business at that time, that I know of.

X. 50. Describe fully and particularly the other machine besides the button-hole machine which you say you saw at M'r Weitling's in May or June, 1863.

A. It was two iron standards, and two cylinders of brass; on the cylinders were rings cut in different shapes, some of them flat, which could be detached or attached. It was screwed on to a wooden board, and behind it were again two standards of wood, between which was a wooden roller. In the board was cut a long hole.

X. 51. Had you ever seen any machine like that before then?

A. No.

X. 52. How long were you looking at or examining that machine at that time?

A. X. I can't say exactly, but so long as it would take M'r Weitling to show the working of the machine, and the samples made on the same.

X. 53. State as near as you can how long it took—a quarter of an hour, a half of an hour, or how long.

A. I had no watch with me; it might have been nearly a quarter or a half of an hour.

X. 54. Did you see any of the rings which you speak of put on or taken off that machine?

A. M'r Weitling took rings off and put them on again, and showed us how that was done.

379 X. 55. You say you saw some flat rings; what do you mean by "flat rings?" Do you mean rings smooth on their outer surface or periphery?

A. I mean smooth rings without teeth.

X. 56. How many of such flat rings were there? State as nearly as possible how many.

A. I know for sure there were four of them, but maybe there were more.

X. 57. How are you able to say for certain there were at least four?

A. Because there were four flat rings together, which I noticed particularly. Of the other kind there were more.

X. 58. Did you count at that time the number of flat rings?

A. Yes; they were just before me, and he took and put two on each cylinder.

X. 59. How thick were those flat rings on their smooth outer surfaces?

A. I think about three-eighths of an inch, but I can't say for sure; I did not measure them.

X. 60. How many other rings did he put on each cylinder with those flat rings?

A. He put a various number on, in order to show us the different patterns.

X. 61. Did he put them on and take them off a number of times, or only once?

A. He did so several times.

X. 62. Did M'r Weitling say that that machine was his invention?

A. As far as I recollect, he said so.

X. 63. Did he state what about that machine he called his invention?

A. He did not state so about any particular part.

X. 64. Did he say that he had got a patent for his machine, or say anything about a patent for it?

A. I do not remember that he said anything about a patent.

380 X. 65. Were the other rings, beside the plain rings, about the same thickness with the plain ones?

A. I cannot recollect. I think they might have been different thicknesses.

X. 66. You say that machine was screwed upon a board. How many screws were there? Answer from what you actually know, not what you think or suppose.

A. I can only say there must have been more than one; but if there were two, three, or four, I cannot say; I did not count them.

X. 67. Can you swear positively that you saw at that time any screws which fastened the machine to the board?

A. I cannot swear, but there must have been screws, because the machine was fastened to the board, and iron cannot be fastened to wood with glue, so that it must have been done with screws.

(All of the answer after the word "but" objected to as irresponsive and not called for by the question; volunteered by the witness, and as simply a conclusion of the witness, which is not asked for and is improper evidence.

Defendants' counsel says that the answer was called for by the question, and the latter part after the word "swear" explains the first part of the answer, and gives an intelligent reason why he cannot swear.)

X. 68. How large was that machine—how much would it weigh?

A. I did not measure it. I should think from six to some eight inches square. The weight of it I cannot determine.

381 X. 69. The machine was iron, except the cylinders, which were brass. Is not that so?

A. Yes.

X. 70. How long was that portion of the cylinder where the rings were put on and taken off, as you say? State as near as you can.

A. Something about three inches or more.

X. 71. How long was the other portion of the cylinder?

A. I did not measure, but should say some five or six inches.

X. 72. What was the diameter of the cylinders that held the rings?

A. I should say one and a quarter or one and an eighth inches.

X. 73. Did you measure their diameter?

A. No; it's only a guess.

X. 74 How long have you been a machinist?

A. For twenty-five years or more.

X. 75. Now, from your experience as a machinist, and with machines of different kinds, how much should you think that machine, its iron frame and brass cylinders, would weigh? State as near as you can.

A. It's difficult to say; I guess eight or ten pounds.

X. 76. After you saw that machine at M'r Weitling's house, as you say, in May or June, 1863, when next did you see it, and where?

A. I did not see it until I saw it here Wednesday last.

The further cross-examination of this witness adjourned to 25th inst.

Adjourned to 23d inst. at 1 p. m.

382 SATURDAY, *November 23d*, 1872.

Present, counsel as before.

SIMON MÜLLER, being duly sworn as a witness on part of defendants, deposes and says as follows:

(The examination of this witness is objected to by complainant's counsel, and each of his answers, on the ground that no notice is given in either of the answers in these cases of this witness.)

Q. 1. What is your name, age, residence, and occupation?

A. Simon Müller; I am 48 years old; residence, 296 E. 4th street, New York; occupation, machinist.

Q. 2. Are you acquainted with fluting-machines, puffing-machines, and crimping-machines, and with their structure and the manner in which they work?

(Same objection.)

A. I am.

Q. 3. How long have you been acquainted with machines mentioned above, and their structure?

(Same objection.)

A. Since 1861, either latter part of 1860 or early in 1861.

Q. 4. State whether or not you have ever known anything used in connection with machines of that kind?

(Same objection.)

A. Yes, sir; I have used different kinds of *guages* and guides.

383 Q. 5. On what part of the machine were the *guages* and guides, such as you mentioned in your last answer, placed?

(Same objection.)

A. Upon a plate which is screwed on the frame of the machine.

Q. 6. Look at the exhibits "Robjohn Machine," and "Werner Machine," now before you, and state whether or not the plate screwed to the frame of the machine, as mentioned by you, was arranged in a manner similar to either one or both of these exhibits; or, if not, state any differance that you discover?

(Same objection.)

A. The plate of which I speak was fastened to the machine of which I speak like the plate in front of the "Exhibit, Robjohn Machine."

Q. 7. Describe as near as you can recollect the kind of gauges or guides you saw fastened to those machines?

(Same objection.)

A. I used different kinds; some of them were straight guides, for the goods to run through, and which kept the goods straight, as the goods passed to the rollers. The next one we had was one with a piece of brass about two inches long, and about a half an inch high in a circular form, and about a quarter or three-eighths of an inch wide. There were movable slides for the goods to pass in between, and we had a *guage* for the goods to pass through before they reach the movable slides. I produce a rough pencil drawing of what I refer to, and a paste-baard model of same.

384 (Defendants' counsel offers in evidence the drawing referred to, and the same is marked "Defendants' Exhibit, Müller, No. 1, Nov. 23d, 1872. R. E. S., Ex.;" and also the paste-board model, which is marked, "Defendants' Exhibit, Müller, No. 2, Nov. 23d, 1872. R. E. S., Ex."

Complainant's counsel objects to the introduction of the same in evidence, as irrelevant under the objections heretofore taken.")

Q. 8. Look at Exhibits S and T, and state what you call them, and whether you ever saw anything similar to them before; and, if so, state how long ago?

(Same objected to, as to question 7.)

A. I should call them guides, and I have used similar ones, in 1862, in connection with fluting-machines.

Q. 9. You speak of *guages* and of guides. What is the difference between a *guage* and a guide?

(Same objection.)

A. I don't know of any substantial difference. Some call the same thing guides, and some call them *guages*.

Q. 10. Describe what kind of fluting-machines those guides you saw in 1862 were used on?

(Same objection.)

A. The machines consisted of brass fluted-rollers, similar to "Exhibit, Robjohn Machine."

Q. 11. Where did you see those guides mentioned by you, used in connection with the fluting-machine?

(Same objection.)

A. I saw all of them used in the city of New York.

385 Q. 12. Did you see any of those guides used after 1862; and, if so, where and when?

(Same objection.)

A. I did; in the city New of York, in 1863, 1864, 1865, and 1866.

Q. 13. What were they used to produce and what material was used?

(Same objection.)

A. The guide represented by "Exhibit, Müller, No. 1 and No. 2," was used to produce what we called diamond trimming, manufactured of silk, and we used guides like Exhibits S and T to produce trimming. Sometimes smaller or narrower guides were used for the same purpose.

Q. 14. Look at these two rings, and state what they were used for, and when they were used, and how they were used.

(Same objection, and also as irrelevant.)

A. They were used in 1863 in a fluting-machine to make the diamond trimming I have described above. They were placed on the fluting-rollers between two rings with fluting-meshes, one above the other, so as to fit in each other, and they were located opposite the guides.

(Defendants' counsel offers the two rings referred to in evidence, and they are marked "Defendants' Exhibits, Müller, No. 3, and Müller, No. 4, November 23d, 1872, R. E. S., Ex."

Same objection as to the introduction of "Exhibits, Müller, No. 1 and No. 2.")

Adjourned to 25th inst., at 1 p. m.

386 MONDAY, *November 25th*, 1872.

Present, counsel as before.

Continuation of the cross-examination of Mr. Körbel:

X. 77. You say you did not see the machine which you saw at M'r Weitling's in 1863 after that time until you saw it last Wednesday. During that time, between 1863 and last Wednesday, had you had any conversations with any persons about that machine?

A. I had no conversations with anybody.

X. 78. Do you mean to be understood that you never talked with any-

body about that machine which you saw at M'r Weitling's in 1863, from the time you saw that machine there until you saw it here last Wednesday?

A. Yes; I have not spoken to anybody about it up to the time I saw it here from 1863.

X. 79. When you saw that machine in 1863, at M'r Weitling's, did you yourself consider it was a machine which amounted to much or was of much importance, and did you look at it there simply because M'r Weitling showed it to you?

A. I simply looked at the machine, as M'r Weitling showed the same to M'r Werner and M'r Aufermann. As to its value or importance I did not form any opinion then, and M'r Weitling did not express himself as to its value or importance.

X. 80. Since you saw that machine at M'r Weitling's down to the time you saw it here last Wednesday, have you yourself thought much or little about that machine, or none at all?

A. I have not thought much of it, because it did not interest me.

X. 81. When you came here to see that machine last Wednesday, at whose request, and with whom did you come, and did you know what you were coming to look at?

387 I came at the request of M'r Werner, to testify that I had seen that machine in 1863 at M'r Weitling's.

X. 82. If you had not seen that machine since 1863 before you saw it here, and if you had not talked with anybody about it during that time, how did you know you was coming here to testify about it? Who told you it was about that machine that they were wanting you to testify about?

A. M'r Werner told me to come and testify about that machine.

X. 83. Did you and M'r Werner at that time have any conversation as to the circumstance of your being at M'r Weitling's together, and what you saw there?

A. M'r Werner simply told me to come here at a certain time to testify about my having seen that machine at Weitling's.

X. 84. At the time M'r Werner so told you to come here to testify, do you mean to say that nothing was said by you or by M'r Werner about that machine which you saw at M'r Weitling's in 1863, or how it was constructed?

(Objected to, on the ground that it inquires of a collateral matter upon which the answer already given is conclusive.)

A. No.

X. 85. You came here to look at that machine the day before you testified about it, did you not, and was M'r Werner here when you so came to look at it?

A. I did not come here to look at the machine; I came here and the machine was on the table. M'r Werner was present.

X. 86. And when you came here at that time, and saw the machine on the table, you looked at it, did you not, with M'r Werner?

A. I did not rise to look at the machine; I saw the same at a distance from my chair.

388 X. 87. On the day you began to give your testimony about that machine, did you not, before you were sworn, examine that machine with M'r Werner, and talk with him about it?

A. There was no examination made by me with M'r Werner; he simply told me that I had to testify about the machine.

X. 88. And that is all M'r Werner told you at that time, is it—that you were to testify about that machine?

A. Yes.

X. 89. Can you state, from your memory of what took place at M'r Weitling's nine years and a half ago, when you looked at that machine, in what particular manner or arrangement the rings were, at different times, on the spindles of that machine?

A. I have only seen M'r Weitling detach and attach said rings to the spindles of the machine in different ways, and explain how the different patterns could thereby be produced, but I don't know in what particular manner.

X. 90. You say you saw different samples of trimmings at M'r Weitling's at that time. Can you testify positively that you saw at that time, in 1863, at M'r Weitling's, samples precisely like the "Exhibits, Weitling Ribbons," or only similar thereto?

A. I have seen samples angle-formed like them, but if the angles were exactly of that size, I cannot determine.

X. 91. Did you see them at that time, at M'r Weitling's, any samples on which there were not impressions of the angle-form such as you refer to?

A. Yes.

X. 92. Describe the arrangement or appearance of such samples which you then saw at M'r Weitling's, and which did not have the angle-form impression. Describe such, particularly as to their form, and every part of it.

389 A. On some of them the impressions on both sides were straight, and the middle there were formed different patterns, as they were formed by themselves, by folding themselves together, as the machine will form it. In the middle they formed themselves into crimples, as the machine will produce them.

X. 93. Did you see any of those samples produced by the machine at that time?

A. No; I did not see the machine produce those samples. M'r Weitling showed us the samples produced by that machine.

(Complainant's counsel objects to the last sentence of the answer as irresponsive.)

X. 94. Those samples which M'r Weitling showed you, have you any knowledge that they were made by that machine, except what M'r Weitling told you?

A. I only know what M'r Weitling himself said about it.

X. 95. You have been asked about a piece of wood, called "Weitling Board," and a bar, called "Weitling Bar." Are those exhibits concerning which you testified the other day the same identical pieces which you saw at M'r Weitling's in 1863?

A. I cannot say if they were identical; they were exactly the same.

X. 96. If that machine which you saw at M'r Weitling's in 1863 interested you so little that you have not thought of it since then, as you have testified, until you saw it here last Wednesday, and if you only looked at that machine as M'r Weitling was showing it to M'r Werner and Aufermann, as you have also testified, how is it you are able to know, after so long a time, to state so particularly the details of what you then saw?

A. Because it comes up in my memory again. I have not so bad a memory that I could not, when this is called up before me, state the particulars about a machine I have seen once before.

390 Redirect:

Q. 97. Look at "Exhibit, Weitling Puffing, No. 2," and state whether or not that is the kind of samples you refer to in your

answer to question 92, when you say, "in the middle they formed themselves into crumples, as the machine will produce them." If this is not the kind of trimming you refer to, please give a more minute description of such trimming.

(Objected to as leading, improper on redirect examination, and on the grounds specified in objecton to question 7.)

A. That is the kind of trimming I refer to in my answer to question 92.

Q. 98. Did you or not come here the day before you gave your testimony for the purpose of testifying? and, if so, state why you did not give your testimony on that day.

(Objected to as irrelevant.)

A. I came here for that purpose, but they were busy taking the testimony of Mr. Werner.

Recross:

X. 99. Do you mean to say the sample "Exhibit, Weitling Puffing, No. 2," is in all respects exactly like the sample shown you by Mr. Weitling, or that this sample illustrates what you call the crumples in the middle?

A. It was exactly like this sample that Mr. Weitling showed me; the sides were straight, and in them were the crinkles like this exhibit.

391 Subscribed and sworn to before me this 25th day of November, 1872.

ERNEST KORBEL.
R. E. STILWELL,
Examiner, &c.

Robert Werner resumed.

Recross:

X. 178. Have you any of the samples made by you, which were of colored stuff, merino, or other woolen material, which were made by you, and such as were shown to Herman & Lautenbach?

A. I think I have some of the same made by me at that time.

X. 179. Will you please produce and annex to your answer a sample of such specimens made by you at that time, one of merino, and one of some other woolen stuff, and mark the same with your initials, and this date, Nov. 25th, 1872?

A. I will.

X. 180. You say the exhibit marked "Werner, Alpaca, Nov. 15th, 1872," is not now the same shape as when it came from the machine: will you produce a piece of that same kind of trimming as it comes from the machine, and mark the same with your initials, and this date, Nov. 25th, 1872, and the word alpaca, so as to identify it?

A. I produce a piece, and it is marked as desired.

X. 181. You say the machine represented in "Exhibit, Re-issue
392 3000," cannot, in your opinion, make trimming like "Exhibit, Werner Alpaca," and "Exhibit, Card Alpaca," and "Exhibit, Piped Alpaca Fluted Puffing." Have you ever seen such machine tried to make trimming like those exhibits?

A. No; I have not seen such machine so tried.

X. 182. You say the "Exhibit, Card Alpaca," is in some parts as it came from the machine, and in other parts not; please point out which portions are as it came from the machine and which not.

A. It is all flattened down a little. The part between the ribbons shows it as it comes from the machine, though it is also a little flattened.

X. 183. Do you understand that the patent "Exhibit, Re-issue 3000," requires or describes any particular depth of the plain zones between the fluted rings?

A. In the patent is not described or required any more particular depth of the plain zones between the fluted rings, than so much as to permit the material to pass freely between them without exerting considerable pressure upon it. In the drawing the zone is shown straight.

X. 184. You say in making the Exhibits J, K, and M, on your machine without the pressure-spring, and when you used your hands to feed in the material, that you did not use your hands in any other way than is usual to lead the material to the fluting rollers. Will you make some trimming like those exhibits with your machine, in the condition you say it was when they were made, and using your hands as you say you then used them, in the presence of the complainant or his solicitor and M'r Kettle, his expert, if they call upon you for that purpose?

A. I will.

X. 185. In your direct examination in this case, you did not testify anything as to the exhibits "Weitling Board" and "Weitling Bar," did you?

A. I was not questioned about it, I think—I don't remember at present.

393 X. 186. Have you any recollection that you did, or that you did not?

A. I do not recollect at present.

X. 187. Can you give any other answer to such question?

A. No.

X. 188. How many times were you casually at M'r Weitling's, and saw that machine on the bureau, after the time you first saw it?

A. Two or three times.

X. 189. At those two or three times did M'r Weitling call your attention to that machine, or did you only see it as you went in and out?

A. I saw it in coming and going. I don't recollect that we spoke about it; may be, and may be not; I am not sure.

X. 190. Have you any recollection that he did speak about it at those two or three times?

A. I can't remember; we generally spoke about the button-hole machine.

X. 191. At any of the *the* times you saw that machine at M'r Weitling' was he using it?

A. No.

X. 192. Do you know, of your own knowledge, that the bar "Exhibit, Weitling Bar," is the same or a different bar from that you say you saw at M'r Weitling's?

A. M'r's Weitling told me that the bar I saw there was broken or lost, and this one was made in place of it.

X. 193. Do you know who made this bar, which is in evidence, and marked "Weitling Bar," and when it was made?

A. I don't know who made it; it was made some 4 or 5 weeks ago.

X. 194. At whose request was it made? Did you have anything to do, directly or indirectly, with having it made or getting it made?

A. M'r's Weitling told me that the roller was lost, and I told her to have one made like the one that was lost; and one of my work-
394 men knew a turner who could do that kind of work, and recommended him to M'r's Weitling. The name of my workman I refer to is Leppert.

X. 195. When did you first see this particular bar, which is marked "Weitling Bar," and where, and in whose possession?

A. I saw this identical bar first here at the examination.

X. 196. How long after the time you first saw the Weitling machine, in 1863, were those two or three times you saw it casually? Soon after? How long after?

A. It was at the time I was making the button-hole machine. It was in the space of two or three months. About fifteen months ago I saw the machine only, and inquired for the board, and M'r's Weitling told me it was in the rubbish-room.

X. 197. When did you make the pieces marked "Exhibit, Werner Strips, November 20th, 1872?"

A. A day or two before the 20th of November, 1872.

Re-redirect:

X. 198. In cross-question 192 you were asked if you knew whether the bar "Exhibit, Weitling Bar," is the same or a different bar from that you saw at M'r Weitling's; to which you reply, "The bar I saw there M'r's Weitling told me was broken or lost." I will ask you whether there is any difference in the appearance of the bar you saw at M'r Weitling's and "Exhibit, Weitling Bar;" and, if so, state what that difference is.

(Objected to as improper at this stage of the examination of the witness.)

A. I do not see any difference in the shape; may be the wood is a little different, and a little difference in the shape, too.

X. 199. Do you, or not, remember distinctly having seen the
395 frame, and a bar adjusted in the frame, and the machine attached to the frame, at Mr. Weitling's house? If so, state what time it was.

(Same objection.)

A. Yes, I do. It was about June, 1863.

X. 200. When M'r's Weitling told you that the board was in the rubbish-room, what did you understand her to mean by that; that the board was thrown aside or was carefully put in the rubbish-room, or how did you understand that? Give her language as near as you can.

(Same objection, and also on the ground that the words from "what did" down to "rubbish-room" are leading.)

A. She said that she had the board in the so-called "Rumpelkammer," and could not get at it just for the moment.

Q. 201. What do you mean by the word "Rumpelkammer?"

(Same objection as to question 199.)

A. This word signifies a room or pantry, generally situated in the garret or under the stairs, where such things are put which are not to be used just for the time, but may be used later; but anyhow are not to be thrown away.

ROBERT WERNER.

Subscribed and sworn to before me this 26th November, 1872.

R. E. STILWELL,
Examiner, &c.

Adjourned to 27th inst., at 11 a. m.

WEDNESDAY, *November* 27, 1872.

Present, counsel as before.

Adjourned to 29th inst., at 12 p. m.

396 FRIDAY, *November 29th*, 1872.

Present, counsel as before.

EDWARD S. RENWICK, being duly sworn as a witness on part of defendants, deposes and says:

Q. 1. What is your name, age, residence, and occupation?

A. Edward S. Renwick. I am 49 years of age. I reside at Milburn, New Jersey; my place of business being in the city of New York. I am occupied principally in acting as expert in the trial of patent causes, and in soliciting patents, and have been so engaged for more than 23 years.

Q. 2. Have you examined the patents granted to the complainant, *them one of* marked "Exhibit, Re issue 3000," and the other marked "Exhibit, Re-issue 3001;" and do you understand the construction and operation of the mechanism described in "Exhibit, Re-issue 3000," and the article of manufacture described in that marked "Exhibit, Re-issue 3001?"

A. I have examined certified Patent-Office copies of the two re-issue patents recited in the question. I believe that I understand the construction and operation of the mechanism described in re-issue No. 3000, and the peculiarities of the article of manufacture described in re-issue 3001.

Q. 3. State whether you have examined the exhibits "Weitling Machine," "Weitling Rings," "Weitling Rollers," "Weitling Board," "Weitling Standards," and "Weitling Bar," and the testimony of Caroline Weitling, Johanna Toedt, and Ernst Korbel in reference thereto, and whether you understand the construction and operation of the said exhibits, respectively and collectively.

397 A. I have examined all of the exhibits referred to in the question. I have also, at the request of counsel for the defendants, read a copy of the testimony of Caroline Weitling, Johanna Toedt, and Ernst Korbel, in reference to said exhibits. I believe that I understand the construction and operation of said exhibits respectively and collectively.

Q. 4. Compare the said Weitling exhibits with the mechanism recited in the claim of the complainant King, in his patent "Exhibit, Re-issue 3,000," and state in what respect the former, severally and collectively, are like or differ from the latter, and give your reasons for any opinion you may express.

A. Upon making the comparison required by the question, I find that in some respects the said Weitling exhibits, when arranged for use, as I understand from the testimony in this case, they were, at times, arranged substantially like the mechanism recited in the claim of the said "Exhibit, Re-issue 3,000," and are in some respects substantially different therefrom.

My reasons for this opinion are as follows:

The mechanism recited in the said claim is a combination of two implements which are, first, a guide composed of two pieces of sheet-metal, secured one over the other at such a distance apart as to permit the passage of the cloth or fabric between them, and also having portions of their breadth curved upwards, or arched transversely, so as to curve the material passed through the said guide, and thereby cause it to occupy less breadth horizontally than it did before being passed through the said guide.

The second implement of said combination is a pair of fluting-rollers, constructed with two rings of fluting-teeth separated by a broad open

space, and having at their outer sides two smooth zones or rings.
398 The said two implements are combined by having the peculiar guide secured to the frame, sustaining said rollers in such manner that the material to be fluted is first caused to pass through the guide, and is then conducted between the pair of fluting-rollers.

Other instrumentalities than those I have above mentioned, such as "pressers" for operating upon the material, are described in the portion of the patent preceding the claim, and are represented in the drawing of the patent, but as I understand said patent, such other instrumentalities constitute no part of the mechanism recited in the claim.

Now, I find that the said Weitling exhibits contain, among other things, an implement which is substantially identical with the second implement recited in the said claim as above stated by me; such Weitling implement consisting of the pair of fluting-rollers which are now in the Weitling machine, which I understand have been called in these cases "Weitling spindles," and which have all the peculiarities of construction of the King fluting-rollers recited in said claim.

I also find, upon reading the testimony, that the said Weitling implement was at times combined with the Weitling board, Weitling standards, and the Weitling bar in such a manner that the material to be fluted was first subjected to the operation of said bar, and was then conducted between the pair of fluting-rollers called the "Weitling spindles." When the said exhibits were so used, inasmuch as the said "Weitling bar" has protuberances upon it of curved or arched section, they constituted a combination of, first, an implement for causing the material passed over said bar to curve so as to occupy less breadth horizontally than it did before being operated upon by said imple-
399 ment; and, second, of an implement consisting of a pair of fluting-rollers substantially identical with the second member of the King combination, recited in said claim.

Moreover the result upon the material subjected to the action of the said Weitling combination is identical with the result produced upon the material by the operation of the said King combination.

The said Weitling combination differs from the combination of mechanism recited in the said King claim, in the respect that the Weitling implement for operating upon the material before it is conducted through the fluting rollers has but a single arched or curved surface, instead of the two surfaces of the two pieces of sheet-metal which form the peculiar King guide, and consequently the said Weitling combination requires the operator to hold the material in contact with the curved surface of the implement, while the upper piece of the King guide performs that work, and thus dispenses with the work of the operator for that purpose.

If, however, the combination recited in the said King claim be assumed to include every combination of, first, an implement for operating on the material in such manner that it is curved transversely, and made to occupy less breadth horizontally before passing through the fluting-rollers; and, secondly, a pair of fluting-rollers substantially identical with the King fluting-rollers, which two are combined in such manner that the same ultimate result, as respects the material, is accomplished as with the King combination; then the Weitling combination is included in the said King combination, and is substantially the same therewith.

Q. 5. State whether you have examined the exhibits "Robjohn Patent," "Robjohn Machine," and "Robjohn Guides;" and whether or not the machine and guides correspond to the said patent; and state whether you understand the construction and operation of said
400 exhibits "Robjohn Machine" and "Guides?"

A. I have examined all the exhibits referred to in the question. The Robjohn machine and Robjohn guides correspond with the mechanism and guides represented and described in the Robjohn patent, as far as said exhibits go; but one of the forms of folding-guide which is represented and described in the Robjohn patent, and denoted therein by the letter C, is not represented by any one of said "Exhibits, Robjohn Guides." I believe that I understand the construction and operation of the said Exhibits "Robjohn Machine" and "Robjohn Guides."

Q. 6. Compare the said exhibits "Robjohn Machine" and "Robjohn Guides," and the folding-guide described in the Robjohn patent, with the mechanism recited in the claim of complainant's patent, "Exhibit, Reissue 3000," and state in what respect the two are alike or differ, and give your reasons for any opinion you may express.

A. Upon making the comparison required by the question, I find that the "Robjohn Machine" and "Guides," when combined as represented and described in the drawing of the "Robjohn Patent," contains a combination which is substantially the same with the combination recited in the claim of the "Exhibit, Re-issue 3000," in the following respects, viz:

Each combination contains two implements. In each of said combinations the said two implements are, first, a guide for operating upon a strip of material, before it passes to the fluting-rollers; and, secondly, a pair of fluting-rollers for operating upon the material after it has passed through the guide.

In each of said combinations the guide is composed of two pieces of sheet metal, secured one over the other at such a distance apart as to permit the passage of the cloth or fabric between them; and in each the guide is curved or arched transversely, so that the cloth or
401 fabric passes between the two pieces of the guide, and is caused to occupy less breadth horizontally than it did before it passed through the guide.

In each combination the fluting-rollers have two rings of fluting-teeth, separated by an open space; the open space of the fluting-rollers of the Robjohn machine being narrower than the open space between the rings of fluting-teeth represented in the drawing of the patent "Exhibit, Reissue 3000," (which difference by itself I should not regard as material, as the breadth of the open space of the King rollers, described in "Exhibit, Re-issue 3000," might obviously be made wider or narrower than it is represented in the drawing, without changing the combination materially.) In each combination the centre of the guide is arranged opposite the centre of an open space between rings of fluting-teeth.

The two combinations are substantially different in *are* following respects, viz:

The guide of "Exhibit, Re-issue 3000," which I will call the "King Guide," is curved or arched throughout its entire length in the direction in which the material passes through it; while the guides described in the "Robjohn Patent" are gradually flattened, so that the material, although made to occupy less breadth horizontally, is flattened before entering the fluting-rollers, while the material passing through the "King Guide" leaves it in an arched or curved form transversely.

The two combinations differ also in the respect that the fluting-rollers of the "Exhibit, Re-issue 3000" have two smooth zones or rings at the side of their fluting-teeth in such position relatively to the guide that the material, after passing through the guide, is caused to pass through the said smooth zones; whereas in the Robjohn combination there are no smooth rings in the same position relatively to the guide.

402 If, however, the combination recited in the said claim in "Ex-

hibit, Re-issue 3000," be assumed to include every combination of, first, an implement for guiding the material to the fluting-rollers, having surfaces, the one above and the other below the material, and curved transversely, and operating to cause the material to occupy less breadth horizontally than it occupied before passing through the said guide; and, secondly, a pair of fluting-rollers so combined with the said guide that portions of the said material are fluted by being operated upon by two rings of fluting-teeth, after the material has been contracted in breadth, then the said Robjohn combination is included in the said King combination, and is substantially the same therewith.

In forming the above opinion, I have taken into consideration the fact that both the "Robjohn Machine," and the machine represented in the drawing of "Exhibit, Re-issue 3000," contain pressers and strippers operating in combination with the fluting-rollers; but as according to my understanding the construction and arrangement of the pressers and strippers do not constitute any part of the combination recited in the said "Exhibit, Re-issue 3000," I do not consider the similarities or differences of the pressers and strippers of the two machines material, and have not therefore taken them into account when expressing my opinion as to the matters inquired of in the question.

Adjourned to December 2, 1872, at 10 a. m.

403 MONDAY, *December* 2, 1872.

Present, counsel as before.

Continuation of the testimony of Edward S. Renwick:

Q. 7. State whether you have examined Exhibits S and T, and "Muller, No. 2," and the testimony of Muller and Robert Werner in reference thereto, and whether you understand the construction and operation of the said exhibits, alone or in connection with fluting-rollers.

A. I have examined the exhibits referred to in the question, and have read the testimony of the witnesses Muller and Werner in reference thereto. I believe that I understand the construction and operation of the said exhibits, and the manner in which they were connected with and used with the fluting-rollers.

Q. 8. Compare the said exhibits with the mechanism recited in the claim in "Exhibit, Re-issue 3000," and state in what respects the former are like the latter, and also compare their connection, as proved, with fluting-rollers, and state in what respects the former are like or differ from the latter, and give your reasons for any opinion you may express.

A. Upon making the comparison required by the question, I find that Exhibits S and T differ from each other in size and in the form of the open space left to enable the material to be readily introduced into them by the operator, but in all other respects they are substantially identical with each other, so that they may be spoken of simultaneously.

The said two exhibits, S and T, are substantially like the first members of the combination recited in the claim of "Exhibit, Re-issue
404 3000," namely, the guide E, in the respect that each of said exhibits and the said guide E is an implement suitable for being used in combination with fluting rollers for the purpose of guiding the material to the same. Also, in the respect that each of said exhibits, S and T, and the said guide E, has two operating surfaces, composed of sheet metal, the one over the other, at such a distance apart as to permit the passage of the cloth or fabric between them.

The said exhibits, S and T, differ substantially from the said guide E in the respect that the former have flat surfaces or portions for holding

the material in a flat condition as it passes to the fluting-rollers, while the guide E has one or more curved or arched portions for causing the material to curve or arch transversely as it passes to the fluting-rollers.

"Exhibit, Muller No. 2," is a guide for fluting-rollers which, in my opinion, is substantially identical with the said guide E in all material respects; thus, it is composed, among other things, of two pieces of sheet metal secured one over the other in such a manner as to permit the passage of the cloth or fabric between them. The lower piece has a curved or arched portion secured to it and curved upward or arched transversely, so that the said piece and arched portion together constitute an equivalent in all essential particulars for the lower arched plate of the guide E when constructed with one curved portion.

The upper piece of "Exhibit, Muller No. 2" is flat, and differs in form from the upper piece of the guide E, represented in "Exhibit, Reissue 3000," but the said upper piece of said "Exhibit, Muller No. 2," is so combined with the lower arched portion of the guide that it
405 bears down the material upon said arched portion and compels it to curve transversely thereon, so that the material leaves the guides in a curved or arched condition transversely as it passes to the fluting-rollers, and, consequently, the said upper flat piece of the said "Exhibit, Muller No. 2," operates in connection with the lower arched portion as an equivalent for the upper piece of the guide E.

In making the said statement I have taken into consideration the fact that, in said "Exhibit, Muller No. 2," the upper piece is a spring and exerts a slight pressure upon the material, whereas in the guide E, described in the patent, the upper piece is rigid. If the pressure of the spring-piece of "Exhibit, Muller No. 2" was sufficient to change the operation of the implement as a whole, I should regard the difference between the upper piece of "Exhibit, Muller No. 2," and the upper piece of the guide E as material; but inasmuch as the pressure of the upper piece of "Exhibit, Muller No. 2" is slight when compared with the extent of the surface of the material on which it operates, and as such pressure, instead of changing the operation of the instrument as a whole, ensures the curvature of the material transversely, by the operation of the lower arched portion of the implement, I regard the said differences as immaterial.

When either Exhibit S or T is connected with a pair of fluting-rollers, as I understand said exhibits were connected, according to the testimony of Muller and Werner, a combination is produced which is substantially like the combination recited in the claim of said "Exhibit, Reissue 3000," in the following respects, viz: Each combination contains two implements. In each of said combinations the said two implements are, first, a guide for operating upon a strip of material before it
406 passes to the fluting-rollers; and, secondly, a pair of fluting-rollers for operating upon the material after it has passed through the guide. In each of said combinations the guide has two surfaces (an upper and a lower) of sheet metal, at such a distance apart as to permit the passage of the cloth or fabric between them; the two surfaces of the guide E being formed of two pieces of metal, while the two surfaces of the guide *Ex*Exhibits S or T, being formed of one piece of metal, bent so that a portion of it is above and a portion of it below the material, which difference, however, is, in my opinion, an immaterial one.

In each combination the fluting-rollers have two rings of fluting-teeth separated by an open space; the breadth of the space of the rollers of the Muller combination being narrower than the corresponding space of the rollers represented in the drawings of "Exhibit, Re-issue 3000,"

which difference, however, I do not regard as material, for the reason given in my testimony relative to the Robjohn exhibits.

The said two combinations are substantially different in the respect of the peculiarities of the guides, which have been before mentioned by me in this answer; also in the respect that the fluting-rollers of "Exhibit, Re-issue 3000" have two smooth zones or rings at the sides of their fluting-teeth, in such position relatively to the guide that the material, after passing through the guide, is caused to pass through the said smooth zones, whereas in each of the combinations of which the Exhibits S and T form part there are no smooth rings in the same positions relatively to the guide. If, however, the combination recited in the said claim of "Exhibit, Re-issue 3000," be assumed to include every combination of

first, an implement for guiding the material to the fluting-rollers,
407 having surfaces the one above and the other below the material;
and, secondly, a pair of fluting-rollers, so combined with the first implement or guide that portions of the said material are fluted by being operated upon by two rings of fluting-teeth, then the said combination of fluting-rollers and Exhibit S or T is included within and is substantially the same as the combination recited in said claim.

When "Exhibit, Muller No. 2" was used in connection with fluting-rollers, I understand that the latter had the rings "Exhibit, Muller No. 3" and "No. 4" opposite the arched portion of the "Exhibit, Muller No. 2," and had rings of fluting-teeth at each side of said rings, "Exhibit, Muller No. 3," and "No. 4." The machine thus composed forms a combination which is substantially the same with the combination recited in the claim of "Exhibit, Re-issue 3,000," in the following respects, viz:

Each combination contains two implements. In each combination the two implements are, first, a guide for operating upon a strip of material before it passes to the fluting-rollers; and, secondly, a pair of fluting-rollers for operating upon the material after it has passed through the guides. In each of said combinations the guide comprises two pieces of sheet metal secured to each other at such a distance apart as to permit the passage of the cloth or fabric between them. In each combination a portion of the guide is curved upward or arched transversely in such a manner as to curve the material passed through said guides, and thereby cause it to occupy less breadth horizontally than it did before it passed through the said guide. In each of said combinations the fluting-rollers have two rings of fluting-teeth, separated by an intervening ring or zone, and in each of said combinations the central curved or arched portion of the guide is arranged opposite the
408 central zone between the two rings of fluting-teeth.

The said two combinations differ from each other substantially in the peculiar forms of the fluting-rollers. Thus the fluting-rollers of "Exhibit, Re-issue 3000" have smooth zones or rings at the sides of their fluting-teeth in such a position relatively to the guide that the material, after passing through the guide, is caused to pass through the said smooth zones, whereas in the Muller machine, with Exhibits No. 2, No. 3, and No. 4, there are no smooth rings in the same positions relatively to the guide. So, also, in the combination "Exhibit, Re-issue 3000," there is an open cylindrical smooth space or zone upon each fluting-roller between the two rings of fluting-teeth, so that the configuration assumed by the arched portion of the material is left to chance; whereas in the Muller machine, with Exhibits No. 2, 3, and 4, there are figuring rings between the two rings of fluting-teeth, so that the configuration imparted to the arched portion of the material is not left to chance, but is determined by the figuring-rings. If, however, the combination recited in

the said claim is assumed to include every combination of two implements, which are, first, a guide, constructed and operated substantially identically with the guide E, and, secondly, fluting-rollers for imparting any desired configuration to the transversely curved or arched material delivered by the guide, so that the material, if stretched out to its full extent, would be wider than the portion of the rollers intervening between the fluting-teeth, and that the said material or fabric will be crinkled or puffed in passing between the portions of the rollers intervening between the fluting-teeth; or if, on the other hand, the combination recited in said claim be assumed to include every combination

409 of, first, a guide constructed and operated substantially identically with the guide E, and, secondly, fluting-rollers having two rings of fluting teeth, substantially the same as the rows of fluting-teeth described and represented in the patent, separated by intervening portions, zones, or rings, either cylindrical or formed as described according to the peculiarity of appearance imparted to the fabric, but agreeing with the combination recited in the said claim in the respect that the fabric subjected to the operation of the combination will be of greater width if stretched to its full extent than the width of the said portions, zones, or rings, either cylindrical or formed as described, according to the peculiarity of appearance imparted to the fabric, but agreeing with the combination recited in the said claim, in the respect that the fabric subjected to the operation of the combination will be of greater width if stretched to its full extent than the width of the said portions, zones, or rings, and the said fabric, by means of its increased width, will be crinkled or puffed in passing between the said portions, then the combination recited in the claim of said "Exhibit, Re-issue 3000," includes and is substantially the same as the combination of the Muller machine containing Exhibits, "Muller, No. 2," "3," and "4."

In expressing the foregoing opinion, I have not taken into account the operation of the pressers or smoothers of either the Müller machines or of the machine represented in the drawing of "Exhibit, Re-issue 3000;" because, as I understand the said "Exhibit, Re-issue 3000," the pressers or smoothers do not constitute any part of the combination recited in the claim, and because the addition of a presser to the machine described in the said "Exhibit, Re-issue 3000" in such manner as to operate at the cylindrical portion C of the rollers, and to operate upon the material passing through the same, although it would have the effect of changing the configuration of the finished material or fabric delivered by the machine, would not change the combination of the guide E and the fluting-rollers recited in the said claim.

Q. 9. State whether you have examined the "Exhibit, Werner Machine," and whether you have seen it operate and understand its construction and operation.

410 A. I have examined the "Exhibit, Werner Machine," and also a machine substantially identical with it, but having several sets of pressers for producing several strips of trimming simultaneously. I have also seen the latter operated, and believe that I understand the construction and operation of the said "Exhibit, Werner Machine."

Q. 10. Compare the said "Exhibit, Werner Machine" with the mechanism recited in the claim of complainant's patent "Exhibit, Re-issue 3000," and state in what respects the two are alike or differ, and give your reasons for any opinion you may express.

A. Upon making the comparison required by the question, I find that the said "Exhibit, Werner Machine" contains a combination which is

substantially like the combination recited in the claim of "Exhibit, Re-issue 3000" in the following respects, viz:

Each combination contains two implements. In each combination one of the two implements operates upon a strip of material before it passes to the fluting-rollers, and the other of the two implements is a pair of fluting-rollers for operating upon the material after it has passed through the first implement. In each of said combinations the first implement comprises two pieces of metal secured to each other in such manner as to permit the passage of the cloth or fabric between them. In each combination the fluting-rollers are substantially the same, having in each case two rings of fluting-teeth separated by a cylindrical portion or ring and having at their outer sides two smooth zones or rings.

The said two combinations are substantially different from each other in the respect of the construction and operation of the combination; thus the first implement of the combination recited in the claim

411 of "Exhibit, Re-issue 3000" has one or more portions of its breadth curved or arched transversely, so as to curve the material passed through it, and thereby cause it to occupy less breadth horizontally than it did before passing through the said implement, the peculiar curved or arched form of the implement having the effect of producing the said horizontal contraction. No similar curved or arched construction exists in the Werner implement for operating upon the fabric before it enters the rollers, and no equivalent for such construction is found in the "Exhibit, Werner Machine."

The implement of the latter consists essentially of a flat plate, upon which the material lies, and of a narrow strong spring arranged to bear upon the upper surface of the material, and detain the narrow portion upon which it presses, so that considerable force is required to pull the said narrow portion into the rollers, while the residue of the cloth, at each side of said narrow portion, is permitted to pass forward without material resistance; consequently, as the rollers operate and pull forward the cloth, the resistance to the motion of its central narrow portion, while the side portions are pulled forward by the rollers, causes the cloth to pucker in a V form, and as the cloth is partially fluted while so puckered, and the drying of the sizing by the heat of the rollers fixes the puckered and fluted form in the material or fabric delivered by the rollers, the said fabric retains the V-form configuration, which it has been caused to assume by the joint action of the spring and the rollers.

No operation of this description is effected by the combination recited in the claim of said "Exhibit, Re issue 3000," and no instrument having the operation of the said spring of the Werner machine is described or suggested in the said "Exhibit, Re-issue 3000."

412 The general result of the operations of the two combinations upon the fabric are alike in the respect, that in the fabric delivered by each the portion passed between the plain central portions of the fluting-rollers is greater if stretched out to its full extent than the width of the said plain portions, and also that the said two fabrics (although different in configuration) will be crinkled or puffed; but I do not regard this similarity material, or as proving to my mind that the two combinations are substantially identical, because the same general result can be produced by feeding the material by hand to the pair of fluting-rollers of either combination without using any implement whatever, to act upon the material before it passes to the fluting-rollers; and in such case the result would be identical in configuration with that produced by the operation of the combination of "Exhibit, Re-issue

3000." Because, further, the same general result and identically the same configuration of fabric is produced by the operation of the Weitling combination, comprising the rollers, called the Weitling spindles and the Weitling bar, whereas the Weitling bar is, as before stated by me, a substantially different implement from the guide of "Exhibit, Re-issue 3000," although more like the latter in the configuration of its operating surface than any portion of the implement which operates upon the fabric in the Werner machine before it passes to the rollers.

Adjourned to 4th inst., at 11 a. m.

413 WEDNESDAY, *December 4th*, 1872.

Present, counsel as before.

Continuation of the testimony of Edward S. Renwick.

Further examination of this witness adjourned to 5th inst., at 11 a. m.

Simon Müller, resumed.

Q. 15. You have stated that you have seen the guides mentioned by you used in connection with fluting-machines in the city of New York. State whereabouts in the city of New York you saw them used.

(Same objection, and also as irrelevant and immaterial.)

A. In Warren street; I forget the number—at Trichet & Welch's place of business, between Church street and College Place. Then we moved down on the next block, between College Place and Greenwich street.

And I used them at Mr Robbins' place of business, corner of Canal and Elm streets, all of which places are in the city of New York.

(Defendant's counsel requests the examiner to mark for identification a brass instrument, which is marked "Müller, No. 5, Dec. 4th, 1872, R. E. S., Ex.)

Q. 17. Please look at the brass instrument, marked "Müller, No. 5," and state when you first saw an instrument like that, and what it was used for.

(Same objection.)

414 A. In about the latter part of 1863 or first part of 1864. We used it on a fluting-machine for guiding the goods. We made diamond trimming with it. I used similar flat guides to S and T before 1863. I used them in the latter part of 1861 or early in 1862. "Müller, No. 5," is composed of two pieces; one is a flat guide and the other is a guide with an arched portion. We sometimes used them singly and sometimes together.

Q. 18. Did you use them singly sometimes and sometimes together with any other instrument; and, if so, what?

(Same objection.)

A. I did; on a fluting-machine.

Q. 19. Where did you use them singly or together?

(Same objection.)

A. In Warren street I used them singly and together too; and in Canal street, corner of Elm, I used the flat guide alone.

Q. 20. Can you ascertain the numbers of the different places mentioned by you, where you used these guides, and will you do so and furnish them when you are called on to continue your testimony?

(Same objection.)

A. Yes, sir; I will.

(Defendant's counsel offers in evidence the brass instrument, marked "Müller, No. 5, Dec. 4th, 1872, R. E. S., Ex.)

substantially like the combination recited in the claim of "Exhibit, Reissue 3000" in the following respects, viz:

Each combination contains two implements. In each combination one of the two implements operates upon a strip of material before it passes to the fluting-rollers, and the other of the two implements is a pair of fluting-rollers for operating upon the material after it has passed through the first implement. In each of said combinations the first implement comprises two pieces of metal secured to each other in such manner as to permit the passage of the cloth or fabric between them. In each combination the fluting-rollers are substantially the same, having in each case two rings of fluting-teeth separated by a cylindrical portion or ring and having at their outer sides two smooth zones or rings.

The said two combinations are substantially different from each other in the respect of the construction and operation of the combination; thus the first implement of the combination recited in the claim
411 of "Exhibit, Re-issue 3000" has one or more portions of its breadth curved or arched transversely, so as to curve the material passed through it, and thereby cause it to occupy less breadth horizontally than it did before passing through the said implement, the peculiar curved or arched form of the implement having the effect of producing the said horizontal contraction. No similar curved or arched construction exists in the Werner implement for operating upon the fabric before it enters the rollers, and no equivalent for such construction is found in the "Exhibit, Werner Machine."

The implement of the latter consists essentially of a flat plate, upon which the material lies, and of a narrow strong spring arranged to bear upon the upper surface of the material, and detain the narrow portion upon which it presses, so that considerable force is required to pull the said narrow portion into the rollers, while the residue of the cloth, at each side of said narrow portion, is permitted to pass forward without material resistance; consequently, as the rollers operate and pull forward the cloth, the resistance to the motion of its central narrow portion, while the side portions are pulled forward by the rollers, causes the cloth to pucker in a V form, and as the cloth is partially fluted while so puckered, and the drying of the sizing by the heat of the rollers fixes the puckered and fluted form in the material or fabric delivered by the rollers, the said fabric retains the V-form configuration, which it has been caused to assume by the joint action of the spring and the rollers.

No operation of this description is effected by the combination recited in the claim of said "Exhibit, Re issue 3000," and no instrument having the operation of the said spring of the Werner machine is described or suggested in the said "Exhibit, Re-issue 3000."

412 The general result of the operations of the two combinations upon the fabric are alike in the respect, that in the fabric delivered by each the portion passed between the plain central portions of the fluting-rollers is greater if stretched out to its full extent than the width of the said plain portions, and also that the said two fabrics (although different in configuration) will be crinkled or puffed; but I do not regard this similarity material, or as proving to my mind that the two combinations are substantially identical, because the same general result can be produced by feeding the material by hand to the pair of fluting-rollers of either combination without using any implement whatever, to act upon the material before it passes to the fluting-rollers; and in such case the result would be identical in configuration with that produced by the operation of the combination of "Exhibit, Re-issue

3000." Because, further, the same general result, and identically the same configuration of fabric is produced by the operation of the Weitling combination, comprising the rollers, called the Weitling spindles and the Weitling bar, whereas the Weitling bar is, as before stated by me, a substantially different implement from the guide of "Exhibit, Re-issue 3000," although more like the latter in the configuration of its operating surface than any portion of the implement which operates upon the fabric in the Werner machine before it passes to the rollers.

Adjourned to 4th inst., at 11 a. m.

413 WEDNESDAY, *December 4th*, 1872.

Present, counsel as before.

Continuation of the testimony of Edward S. Renwick.

Further examination of this witness adjourned to 5th inst., at 11 a. m.

Simon Müller, resumed.

Q. 15. You have stated that you have seen the guides mentioned by you used in connection with fluting-machines in the city of New York. State whereabouts in the city of New York you saw them used.

(Same objection, and also as irrelevant and immaterial.)

A. In Warren street; I forget the number—at Trichet & Welch's place of business, between Church street and College Place. Then we moved down on the next block, between College Place and Greenwich street.

And I used them at Mr Robbins' place of business, corner of Canal and Elm streets, all of which places are in the city of New York.

(Defendant's counsel requests the examiner to mark for identification a brass instrument, which is marked "Müller, No. 5, Dec. 4th, 1872, R. E. S., Ex.)

Q. 17. Please look at the brass instrument, marked "Müller, No. 5," and state when you first saw an instrument like that, and what it was used for.

(Same objection.)

414 A. In about the latter part of 1863 or first part of 1864. We used it on a fluting-machine for guiding the goods. We made diamond trimming with it. I used similar flat guides to S and T before 1863. I used them in the latter part of 1861 or early in 1862. "Müller, No. 5," is composed of two pieces: one is a flat guide and the other is a guide with an arched portion. We sometimes used them singly and sometimes together.

Q. 18. Did you use them singly sometimes and sometimes together with any other instrument; and, if so, what?

(Same objection.)

A. I did; on a fluting-machine.

Q. 19. Where did you use them singly or together?

(Same objection.)

A. In Warren street I used them singly and together too; and in Canal street, cornér of Elm, I used the flat guide alone.

Q. 20. Can you ascertain the numbers of the different places mentioned by you, where you used these guides, and will you do so and furnish them when you are called on to continue your testimony?

(Same objection.)

A. Yes, sir; I will.

(Defendant's counsel offers in evidence the brass instrument, marked "Müller, No. 5, Dec. 4th, 1872, R. E. S., Ex.)

(Same objection as to the introduction in evidence of "Exhibits, Müller, No. 1 and No. 2.")

Q. 21. Look at "Exhibit, Müller, No. 2," and "Exhibit, Müller, No. 5," and state what the difference is between them, if any.

415 (Same objection.)

A. The difference is that the flat guide in "Exhibit, Müller, No. 5," is movable, while in "Exhibit, Müller, No. 2," it is fastened, because on the pasteboard exhibit the flat guide was fastened to show the position it was used by me at the places stated.

Q. 22. Can you state positively that the "Exhibit, Müller, No. 5," is, or is not, a correct representation of the guides you used at the times and places named by you?

(Same objection.)

A. Substantially, I can.

By consent of complainant's counsel, Robert Werner recalled:

Q. 1. In question 59 you were asked "How long have you known those Exhibits S and T for guiding the material to the fluting-rollers?" to which you answered, "Since about 1864 or 1865." State where you knew them to be used for that purpose and by whom.

A. At 383 Broadway; at Mr. Hecht's place of business I used them.

Q. 2. Who used them there?

A. I used them, and they were used by the other hands working at that place.

ROBERT WERNER.

Subscribed and sworn to before me this 4th day of December, 1872.

R. E. STILLWELL,
Examiner, &c.

Adjourned to 5th inst., at 11 a. m.

416 THURSDAY, *December 5th*, 1872.

Present, counsel as before.

Continuation of the testimony of E. S. Renwick:

Moreover, the similarity in the general result produced by the Werner machine and the machine described in "Exhibit, Re-issue 3000," does not, in my opinion, prove that the "Exhibit, Werner Machine" contains a combination substantially identical with that recited in the claim of "Exhibit, Re-issue 3000," because I find that in the two machines the general result is accomplished by different modes of operation; thus, in the use of the machine described in "Exhibit, Re-issue 3000" the general result is due the peculiar arched form of the guide, which imparts a corresponding transverse curvature to the fabric before it enters the rollers, and leaves the rollers nothing to do but to flute the fabric in two strips and to flatten the fabric at the sides of the fluting, leaving the central arched portion of the fabric free to take such form as it may. In the Werner machine, on the other hand, the general result is due in part to the pressure of the spring and in part to the operation of the rollers, which do not only the same work as the rollers in the machine "Exhibit, Re-issue 3000," but in addition, by pulling forward the margins of the fabric against the resistance applied to its central portion by the operation of the spring, draw the margins of the fabric inward, and thus, in connection with the spring, produce the V-formed fluting at the centre of the fabric.

This difference in the mode of operation is demonstrated by the operations required to produce a change in the fullness of the central por-

tion of the fabric in the two machines; thus in the machine "Exhibit, Re-issue 3000," a change of the central fullness is effected by
417 changing the transverse curvature of the guide through which the fabric passes, the two operating surfaces of the guide being retained at the same distance apart; whereas in the Werner machine a change in the central fullness is produced without any change whatever in the form of the implement through which the fabric passes in its way to the rollers, and without any change in the transverse curvature of the implement, because it is flat transversely and has no transverse curvature to be changed; the change is effected in the Werner machine by increasing or diminishing the pressure of the spring so as to offer a greater or less resistance to the movement of the central portion of the fabric; or the change may be effected by varying the breadth of the spring or by moving the spring towards or from the fluting-rollers, or by two or all three of the said three operations.

If, however, the combination recited in the said claim of "Exhibit, Re-issue 3000," be assumed to include every combination of, first, an implement for operating upon the fabric before it passes to the fluting-rollers, without a restriction as to the peculiarities of construction or mode of operation of the said implement, and, secondly, a pair of fluting-rollers, so combined with the said implement that the portions of the fabric are fluted by being operated upon by two rings of fluting-teeth, and the fabric, when completed and stretched transversely to its full extent, is of greater width than the width of the portions of the rollers between the two rings of fluting-teeth, then I should be of opinion that the combination recited in said claim would include the combination found in the "Exhibit, Werner Machine."

Q. 11. Which of the machines in evidence in these cases is most like the combination recited in the claim of "Exhibit, Re-issue 3000?"

A. The Weitling machine, with the exhibits "Weitling Spindles," "Weitling Bar," and the "Exhibit, Werner Machine," are equally
418 most like the combination recited in "Exhibit, Re-issue 3000," as respects the peculiar form and mode of operation of the fluting-rollers.

The Müller machine, with "Exhibits, Müller, No. 3, No. 4, and No. 5," is most like the combination recited in said re-issue as respects the construction and mode of operation of the guide.

The Weitling and the Müller machines referred to by me in this answer are most like the combination recited in said "Exhibit, Re-issue 3000," as a whole, the said Weitling machine lacking only a curved plate over its bar, corresponding with the upper curved plate of the guide E, to make the said Weitling machine substantially identical in all respects with the combination recited in said claim; and the said Müller machine requiring only the removal of the figuring surfaces of the rings, "Exhibits, Müller, No. 3, and No. 4," and the removal of zones of the fluting teeth, opposite the margins of the guide, to make it substantially identical in all respects with the combination recited in the said claim.

Q. 12. Compare the "Exhibit, Weitling Puffing," and "Exhibit, Weitling Puffing, No. 2," and "Exhibit, Pipo Puffing," "Exhibit, King's Puffing of 1866," and defendants' Exhibits A, B, C, and I, and the fabrics delineated in "Exhibit, Standard Puffing," and exhibits D, E, F, and G, with the puffing described in "Exhibit, Re-issue 3001," and state wherein each of the former is alike or different from the latter, and give your reasons for any opinion you may express.

A. The puffing described in "Exhibit, Re-issue 3001," as I understand the same, is a cloth fabric consisting of a single piece or strip, having

its central portion crinkled, gathered, or irregularly waved, with two margins which are fluted, and two borders or portions outside of
419 the fluting, which are flattened to enable them to receive stitching.

The said article, as I understand the patent, is not restricted to any peculiar irregularity of crinkling, gathering, or waving of the central portion, and consequently an article which has a central portion crinkled, gathered, or irregularly waved would in that respect be substantially the same as an article of manufacture with the puffing described in "Exhibit, Re issue 3001." The said puffing also, as I understand the patent, is not restricted to any peculiarity of the fluted portion, except that they are to be substantially regular and uniform; or, in other words, the material at those portions is to be formed into waves of practically uniform protuberances. The said puffing also, as I understand the patent, is not restricted to any peculiarity of method by which the flattened borders are produced or to any particular width of such borders; and, inasmuch as the practical effect of the mechanism which is stated in the patent to be suitable for manufacturing the article is to compress the flattened borders into a series of plaits, overlapping each other with more or less irregularity, any fabric which has flattened borders produced by plaiting is substantially the same, in that respect, with the said puffing. I may further say that an article of manufacture is distinguished by its mechanical construction or its properties, and not by its configuration or ornamental design, unless such configuration or ornamental design changes the mode of operation or properties of the article. Thus, for example, if a button existed composed of a single piece of material having a disc of the requisite thickness, and perforations for the insertion of thread, by which it is to be secured to a garment, the change of the configuration of the surface of such disc, or the making of the button six or eight sided instead of round, which changes would only effect the appearance of the article, and not its mode of operation or its mechanical construction, would not make a new
420 article of manufacture, but would be simply changes in the ornamental design of the article. I may also say that the method of the mechanism by which an article of manufacture is produced is not, in my opinion, to be considered as characterizing the article of manufacture, and that it is immaterial whether an article be produced wholly by hand or wholly by machinery, or partly by each, or partly by a machine of one kind and partly by a machine of a different kind, so long as the mechanical construction or properties of the article are substantially the same.

Upon making the comparison required by the question, and with these views as to the said puffing described in "Exhibit, Re-issue 3001," I find that "Exhibit, Weitling Puffing" differs substantially from said patented puffing in the respect that it has but one flattened border instead of two. It also differs from the puffing described in the drawing of the patent in the respect that the central portion is regularly crinkled instead of irregularly waved. I do not, however, regard this last difference as material as respects the puffing as an article of manufacture, because whether it be regularly or irregularly waved is a difference in the design or ornamental appearance of the article, and not a difference in its mechanical construction or in its properties; thus the property incidental to the central waving is that the article is fulled or puffed up as compared with the flattened borders, and such fulling or puffing is attained whether the crinkling be regular or irregular.

"Exhibit, Weitling Puffing, No. 2," is, in my opinion, in all respects

identical with the said patented puffing, both as an article of manufacture and as presenting substantially the same design.

"Exhibit, Pipo Puffing," is, in my opinion, substantially the same as an article of manufacture with the said patented puffing, and has longitudinal rows of stitching in or along the flattened portions of
421 the borders, put in, substantially as described in the patent, by means of a sewing-machine.

From the appearance of this exhibit I should presume that it had been produced by the operation of a sewing-machine fitted with a plaiting-knife or some similar attachment; but I consider that this fact does not make the exhibit substantially different from the patented puffing described in "Exhibit, Re-issue 3001," because the machine by which an article is produced constitutes no part of the article, and because, however the said exhibit may have been made, it is a strip of cloth having a central crinkling, two fluted portions at opposite sides of said central crinkling and two flattened borders, all substantially the same in their relative positions and mechanical construction with the corresponding parts of the said patented puffing.

"Exhibit, Puffing of 1866" is, in my opinion, substantially the same article of manufacture as is described in "Exhibit, Re-issue 3001," having a central crinkled portion with fluted portions at opposite sides of such crinkled portion and flattened borders at the edges, in which stitches are inserted. I notice that in one part of these exhibits, marked "B," the crinkling of the central portion is irregular, so that these parts of the exhibits are not only substantially identical with the puffing described in "Exhibit, Re-issue 3001," in their mechanical construction as articles of manufacture, but also presenting substantially the same irregularity of configuration or design. Other parts of said exhibit, marked "A," have their central portions regularly crinkled. As, however, the exhibits are evidence that the same article, although regularly crinkled for one part of its length and irregularly crinkled for another part, has the same fullness of material, is fluted in the same manner in the portions adjoining the borders, and has the same flattened borders, the regular or irregular crinkling of the central portion does not
422 make the part of the article having the former a substantially different article of manufacture from the part having the latter, but simply changes the appearance to the eye, thus constituting a difference in the design of the article at its different parts.

Exhibits A, B, C, and I all exhibit puffing which is substantially identical, as an article of manufacture, with the patented puffing. Exhibit A appears to have been made with a sewing-machine; but I do not consider that fact makes the article substantially different as an article of manufacture from one which has been produced by a fluting-machine.

I also notice that the fluted portions at the sides of the central crinkled portions are smaller than the corresponding fluted portions represented in the drawings of the patent; but I consider that this difference is immaterial, because, as I understand the said "Exhibit, Re-issue 3001," the article of manufacture described in it is not limited to any peculiar prominency of the waves of the fluting, but requires only that the said portions at each side of the central portions shall be fluted, or, in other words, shall have the material formed into waves of substantially uniform size. Exhibits B and I have the appearance of having been made in part by a fluting-machine and in part by a sewing-machine, and the material has either been dampened since it left the fluting-machine or has been delivered from a fluting-machine before it was sewed in a damp state, as it would be if the rollers of the machine were not heated and

427 THURSDAY, *December 12th*, 1872.

Present, counsel as before.

Adjourned to 16th inst., at 11 a. m.

MONDAY, *December 16th*, 1872.

Present, counsel as before.

Cross-examination of Edward S. Renwick.

X. Q. 15. How long have you known of or been familiar with the "Exhibit, Re-issue 3000" or the machine described in it?

A. I knew of the "Exhibit, Re-issue 3000" several weeks before my direct examination was commenced. I cannot fix the exact date when I first knew of the exhibit without reference to memoranda, which are at my office. I understood the machine from reading the "Re-issue 3000," from reading the description and examining the drawing, and shortly before my examination was commenced a machine was exhibited to me at the store of Kursheedt, King & Co., in this city.

X. 16. Previous to your investigation in this case had you been familiar with and particularly examined and informed yourself as to fluting-machines of various kinds?

A. Previous to the date when I first knew of this case I had seen and examined a number of fluting-machines of various descriptions, principally those for what may be called plain fluting, and I was familiar with the operation of such machines as I had examined.

X. 17. Do I understand you as giving it as your opinion, with reference to "Exhibit, Re-issue 3000," that the claim in such exhibit embraces only the guide formed of two pieces, between which the cloth passes, and so curved or arched as to take up material so that it occu-
428 pies less breadth horizontally than before passing through said guide in combination with a pair of fluting-rollers generally considered?

A. I do not think the language of the question expresses precisely my opinion, which is, that the language of the claim embraces the combination of two members, substantially such as are described in the patent: the first member being the guide E, constructed of two arched or curved plates, (which, however, may be arched or curved at one or more portions of their breadth,) so arched or curved as to curve or corrugate transversely the material, and thereby cause it to occupy less breadth horizontally than is occupied before being passed through said guide. The second member of the combination does not consist of every pair of fluting rollers generally, but of a pair of fluting-rollers constructed with two rings of fluting-teeth, separated by an open space and having at the outer sides of said fluting-teeth two smooth zones or rings. These two members must be combined in such manner that the material or fabric, after being caused to curve by the operation of the guide, is operated upon by the fluting-rollers. I understand also that the claim embraces a guide which is the substantial mechanical equivalent of the guide E, having the same mode of operation therewith.

In the machine represented in the drawings of the patent the guide E is set in an inclined position in front of the fluting-rollers, but I do not understand that the combination recited in the claim is restricted to this peculiar inclined position, but that the position must be such that the material after being curved transversely by the operation of the guide passes in that curved form to the fluting-rollers, so that the curved portion of the material may be formed into what may be called the fullest portion of the fluted fabric.

X. 18. And the guide E is to be placed opposite the open space between the fluting-rings or teeth, is it not?

429 A. It is placed directly opposite the open space between the fluting rings or teeth both vertically and horizontally, as represented in the drawings, but I do not consider that it would be proper to restrict a combination claimed by that precise location, as I have no doubt that the location of the guide E might be varied without materially affecting its operation or the combined operation of the combination recited in the claim.

X. 19. Have you mentioned in your last answer but one all the elements which in your opinion are embraced within the claim of "Exhibit, Re-issue 3000"?

A. I believe I have; but there is a question in my mind as to whether the combination recited in the claim does not include fluting-rollers, which are substantially like those represented in the drawings of the exhibit, in every respect, except that they may have the central open space or zone, fitted with projections and indentations so as to impart a definite form to the central curved portion of the fabric. As such projections and indentations would be in the nature of an addition to what is represented and described in the patent, and as the language of the descriptive portion of the patent is less definite in reference to the rollers than it is in reference to the guide E, there is a question in my mind whether a person who should construct a machine with such modified fluting-rollers and a guide E, or an equivalent therefor, would not embody in substance the combination recited in said claim.

X. 20. What, in your opinion, do the words "substantially as herein set forth in the claim of 'Exhibit, Re-issue 3000'" mean?

A. I understand that they mean in substance that the construction of the guide and its combination with the fluting-rollers and the construction of the fluting-rollers are all to be substantially as set forth in the previous descriptive portion of the patent.

430 X. 21. Is not the machine described in "Exhibit, Re-issue 3000" a machine for making a particular kind of trimming and which trimming is also described in the specification of said patent?

A. As I understand the patent it states in substance that the purpose of the invention is to make puffing, which is described in the following two paragraphs, viz, the one commencing with the words, "This invention is designed" and ending with the words, "between the flutes;" and the paragraph commencing with the words, "The invention consists," and ending with the words, "surfaces in the puffing."

In another portion of the patent it refers to the puffing represented in Fig. 4, in which figure the central portion is represented as crinkled or waved with a considerable amount of regularity; but my opinion is that the purpose of the invention is not restricted to the production of puffing or trimming which has the exact design or configuration represented in that figure; and if a person should use a machine substantially the same as that recited in the claim for the purpose of making puffing, which differed in design or configuration from that represented in said figure 4, but was substantially within the description contained in the two paragraphs previously referred to by me, such person by such act would not escape from using in substance the machine recited in the claim.

X. 22. In the formation of the trimming described in the patent, "Exhibit, Re-issue 3000," and for the making of which a machine described in that patent is designed, is it not necessary that there should be flattened borders outside of the rows or lines of fluting?

A. In my opinion it is, unless a machine were constructed with some

attachment behind the rollers, for the purpose of flattening down portions of the fabric, which had been fluted by the rollers.

431 X. 23. If such an attachment was used for that purpose it would be practically a part of the machine, would it not?

A. If it was attached to the machine (which is one of the ideas conveyed by the word "attachment") it would for the time being be substantially part of the machine; but I can conceive it possible that a separate machine might be employed to operate upon the fabric after it had left the fluting-machine.

X. 24. Suppose the machine described in "Exhibit, Re-issue 3000" was new in all its parts, and that a patent therefor was admitted to be good and valid, and a suit was brought for an alleged infringement thereof, and the defendant, instead of making the complete trimming by one operation and machine, should by the first operation or machine make such trimming except flattening the required parts thereof, and should then take the material after it had been run through the first machine, and should run it through a second machine, separate from and disconnected with the first, and which performed the flattening operation, would such person, in your opinion, escape or avoid the infringement of such patent by making two machines separate from each other to perform the same work which the single machine described and shown in the patent performs?

A. Whether such person would or would not escape would depend upon circumstances which are not stated in the question. It would also depend upon the understanding to be put upon the language of the first portion of the question. I will assume one of such understandings to be as follows, viz: that the machine is to be new in all its parts, considered individually, and that the patent therefore is to contain claims reciting severally every separate part of the machine by itself as well as other claims reciting severally every combination of two or more of said parts existing in said machine. Under this assumption the

432 said person would not escape or avoid the infringement of such patent, according as he did not or did use in one or both of said machines one or more of the parts recited in some one or more of the assumed claims.

Under another understanding of the language of the question it may be assumed that the patent contains but one claim, for a certain combination of certain parts of the machine, which parts are designated by name in the said claim. If in such event such person should embody the said combination in substance in either one of the said two machines he would not escape or avoid infringement.

But if such person should use in one of said machines one of the parts recited in the claim in connection with other things which were not substantially the same as or equivalent for the other part or parts recited in said claim, and should use in the other machine another one of the parts recited in said claim, in connection with things which were not substantially the same as or equivalents for the other part or parts recited in said claim, the said two machines being operated separately, such person, in my opinion, would not use the combination recited in the claim and would avoid or escape infringement.

X. 25. You say that in your opinion in the formation of the trimming described in "Exhibit, Re-issue 3000," and for the making of which the machine described in that re-issue is designed, it is necessary that there should be flattened borders outside of the rows or lines of fluting. Is any mechanism described in that exhibit for making such flattened borders; and, if so, what?

433 A. I made such a statement of my opinion with a qualification, which was subsequently enlarged; see my answer to cross 22 and cross 23; and in answering said cross 22 I had the impression at the time that the flattened borders referred to were intended to mean the smooth portions or zones of the rollers at the outer borders of the fluting-teeth. I understand now from a verbal explanation of complainant's counsel that the flattened borders intended in the question are the flattened borders of the trimming or fabric, and not parts of the machine.

There are two kinds of things described in the patent for producing the said flattened borders, viz: the narrow annular spaces B of the rollers or smooth zones, at the outer sides of the rings of fluting-teeth, and the pressers D, with their appurtenances, which operate in combination with said zones.

X. 26. The narrow, annular spaces or zones referred to in your last answer are cut out to receive the pressers you refer to, and the pressers are shaped to fit into or lie in such annular spaces or zones, are they not?

A. In the machine represented in the drawings, "Exhibit, Re-issue 3000," the said smooth zones are made deep enough to permit the pressers (which have somewhat the form of the letter S) to be passed through between the rollers. The shape of the said pressers is such as to enable them to be inserted through the groove formed by the said smooth spaces or zones, with their front ends at the front side of the upper roller and their rear ends at the rear side of the lower roller. I presume that the spaces are made deep enough to permit the pressers to be inserted through between the rollers, and the curvature of the pressers is such as to cause such parts of them as are opposite to the lower roller to bear the fabric closely in contact with the smooth surfaces of the zone to which the presser is applied.

434 X. 27. Those narrow annular spaces or zones outside of the fluting-rings, and described as a part of the machine set forth in the patent, "Exhibit, Re-issue 3000," are in fact made, are they not, in your opinion, for the reception of the pressers, and for those pressers to act in?

A. They are made, in my opinion, for the purpose of permitting the material to be flattened in the same machine in which it is fluted. In the said machine they operate in connection with pressers of a peculiar form, but I do not understand that the said narrow annular spaces are made specially for the reception of the pressers.

X. 28. By the machine described in re-issue 3000, and in which there are those narrow annular spaces, (which you say are made for the purpose of permitting the material to be flattened,) can the material be flattened by anything described in that machine except by the pressers or their equivalent?

A. If the machine is constructed, as I understand from the question, it is to be in all respects as described in the patent; the fluting is done by the combined action of the said smooth spaces and the pressers, and nothing else.

X. 29. Without the pressers, or their equivalent, there would be produced by the machine described in such patent no flattened borders, even though the narrow annular spaces referred to were made in the rollers; am I right?

A. If the proportions of the rollers are in all respects the same as are represented in the drawings, flattened borders would not be produced if the pressers were removed from the machine.

X. 30. In the machine described and illustrated in "Exhibit, Re-issue

3000," having narrow annular spaces in the rollers, and such spaces made to permit the material to be flattened, it is necessary, is it not, that some device, acting in connection with those spaces, substantially
435 like the pressers described in that exhibit, should be used to effect, with such annular spaces, the flattening of the material?

A. I don't understand that it is. If the spaces in both rollers are to be made as deep in degree as they are represented to be in the drawings of the patent, then some additional instrument to the rollers must be used to operate in connection with said rollers, and effect the flattening; but I do not understand that it is essential that both or either of said spaces should be as deep in degree as they are represented to be in the drawings of the patent; and if both were shallower, or if one was deep and the other was shallow, so that the two opposite surfaces of the smooth spaces could roll upon the material and compress it between them, the flattening could be effected without the use of pressers or other implement additional to the rollers, while the rollers would be substantially the same rollers as are described in the patent, although different from the latter in the degree of depth of the narrow, smooth spaces.

X. 31. But whether such annular narrow spaces are deeper or shallower it is necessary, in order to produce the flattening of the material, is it not, that same device or mechanism should act against or upon the smooth surface or such annular spaces?

A. If the material is to be flattened in the same machine in which it is fluted, and that such flattening is to be done in part by the operation of the fluting-rollers, it is necessary that either something operating like the presser described in the patent should bear the material against the smooth surfaces of one of such annular spaces or that the opposite surfaces of the annular spaces should co-operate with each other to press the material between them.

436 X. 32. These annular narrow spaces or zones referred to by you in your last few answers are the same as the two smooth zones or rings at the outer side of the fluting-teeth, mentioned in your answer to cross-question 17?

A. They are.

Adjourned to 17th inst., at 12 m.

TUESDAY, *December 17th*, 1872.

Present, counsel as before.

Continuation of the cross-examination of E. S. Renwick:

X. 33. In the machine described and illustrated in "Exhibit, Re-issue 3000," the narrow annular spaces or zones are made deep enough to receive the pressers, are they not, and does not the breadth of such annular zones correspond to the width of the pressers also, described and shown in said exhibit?

A. In the machine referred to, the narrow annular spaces or zones are made deep enough to both receive the pressers and to permit them to be passed through between the rollers. The breadth of the said spaces or zones corresponds with the width of the pressers represented in the drawing and described in the descriptive part of the exhibit, with the allowance of a small space for clearance or play, so that the fabric may pass between the pressers and the rollers at those places.

X. 34. In the machine described in that exhibit, is there any device to operate in connection with the narrow annular spaces for making the flattened borders of the trimming, except the pressers marked "D?"

A. There is, namely, the guide E, which directs the fabric to such narrow annular spaces, as well as to the other portions of the rollers, which are to operate upon the fabric, and also holds those portions of the
437 material which are to pass through said narrow spaces in a flat condition.

X. 35. Does the guide E perform any function or operation in actually flattening, in connection with the narrow annular spaces, the flattened borders of the trimming? Is not the flattening of the borders actually performed by the pressers acting in connection with the narrow annular zones, whatever may be the office of the guide in directing the material into the machine or between the rollers; and is there any device or mechanism shown or described in the machine described in such exhibit, except the pressers D and the said annular zones, for effecting the flattening of the flattened borders?

A. The guide E does not perform any operation in actually flattening in connection with the said annular spaces. The flattening of the borders is done by the joint action of the pressers D, and the narrow spaces or smooth zones of the machine represented in the drawings of the patent. There is no other device represented in the drawings of the patent or described, for the purpose of doing the work of flattening, than the pressers and the narrow smooth zones of the roller.

X. 36. To form the flattened borders of the trimming described in "Exhibit, Re-issue 3009," and which are described in that exhibit as pressed flat by passing under the pressers D as the fabric is drawn along, must not the pressers or their equivalents press upon the smooth surfaces of the annular spaces with some degree of force, and does not that exhibit describe and illustrate means for varying the pressure of such pressers upon the surfaces of the annular spaces?

A. To form the flattened borders, as stated in the question, by the operation of a machine constructed in all respects like that represented in the drawings of the patent, the pressers must not press upon the smooth surfaces of the annular spaces with any force, because if they did so, they would obstruct the passage of the fabric. The pressers must
438 be held from separating from the smooth surfaces of the annular spaces or zones; and the drawings of the patent represent adjusting screws, which determines the distance to which the pressers can separate from the said smooth surfaces. By adjusting the said screws, the fabric may be flattened to a greater or less extent, or the machine is adjusted to permit fabrics of greater or less thickness to pass between the pressers and the said smooth surfaces, and to be flattened to the desired extent.

X. 37. Do not the pressers referred to in the last question press upon the fabric as it passes between such pressers and the surfaces of the annular spaces, and by such pressure produce the flattened borders?

A. Of course the pressers press upon the fabric and the flattening is produced by the joint action of the pressure of the pressers upon one side and the smooth surfaces of the zones on the other.

X. 38. To produce such flattening it is necessary, is it not, that the pressers should press upon the fabric with some degree of force?

A. It is, if the machine is constructed in all respects as represented in the drawings of the patent.

X. 39. You speak of the open space between the fluting teeth in the machine described in "Exhibit, Re-issue 3009," as a feature or characteristic of the second member of the combination embraced in the claim; the opposite surfaces of such open space do not act upon the material to

produce any such result or effect as is produced by the combined action of the pressers and the narrow annular spaces before referred to?

A. Whether the said open spaces do or do not produce any such result or effect as is produced by the other things mentioned in the question, depends upon what result is assumed to be effected by the said other things. There is no doubt that the said surfaces produce the same effect in kind, although greatly less in degree than the said other
439 things; that is to say, the said spaces cause the central portion of the fabric to occupy less space in the thickness than it otherwise would, but they do not press it down as flat as the pressers and narrow smooth zones do.

X. 10. Please refer to the patent "Exhibit, Re-issue 3000," and answer the last question from what is contained in such patent, assuming or supposing nothing whatever as to the effect produced by the surfaces of the open space between the space', or of the pressers or annular spaces upon the material, except what is found in such exhibit.

A. The patent, in speaking of the open spaces or smooth cylindrical portions, states in substance that the effect of said portions is to press the convex surfaces of the material downward, and, when speaking of the pressers, states in substance that they are to press the portions on which they act, flat.

Now pressing downward and pressing flat, as I understand these operations, are both effects which are the same in kind but different in degree, and as the language of the preceding question inquires whether the opposite surfaces of the open spaces or cylindrical portions do not produce any such result or effect as is produced by the combined action of the other parts mentioned, I do not perceive that I can answer it in any other way than by saying that the effect is the same in kind, but different in degree. In both cases the fabric is acted upon by two surfaces. In both cases the article is pressed between the two surfaces, although the pressure is greatly less in degree with one combination of the surfaces than it is in the other, and in both cases the effect is to make the fabric at the parts pressed flatter than it would otherwise be.

X. 11. The fabric is pressed flat by passing between the pressers and the surfaces of the narrow annular spaces, is it not? and the fabric is not pressed flat in the same sense by passing between the sur-
440 faces of the open space and between the fluting parts or teeth? Am I correct?

A. If the term "flat" is understood to mean a flattening to such extent that——

(Counsel for complainant uses the term "flat" in the sense it is used in the words "pressed flat" in the patent referring to the formation of the flattened borders.)

There is no language in the patent that defines the meaning of the words "pressed flat;" and as I understand the language in the patent, they mean the flattening of the fabric at the points pressed as compared with what the fabric would be if it was not pressed.

If, for example, the borders of the fabric are pressed flat enough to permit longitudinal rows of stitching to be sewed through them, they would be pressed flat within the meaning of that term in the patent, although the surfaces of the plaits produced by the pressure were not all in absolute contact with each other.

Both of the combinations of devices mentioned in the question have the effect of flattening the material as compared with what it would be if they did not operate upon it. The pressers and smooth surfaces of the narrow zones may be so adjusted to each other as to flatten the ma-

terial until the surfaces of the plaits are in contact, or to flatten them to a less extent.

The surfaces of the central portions operate as described in the patent, to effect some pressure upon the material which passes between them, and therefore flatten that material to some extent, although to a greatly less extent than the pressers and smooth zones are capable of flattening.

441 X. 42. Do you wish to add anything further to your answer?

A. I do not.

X. 43. The difference in degree of pressure, mentioned in your answer to the 40th question, in the two cases is such, however, is it not, that the form of configuration is so widely different that the appearance of that portion of the fabric pressed between the pressers and the surfaces of the narrow zones is wholly unlike that of the portion of the fabric passing between the surfaces of the open space referred to?

A. There is no doubt that the appearance of the fabric at the two different parts inquired of is different.

X. 44. Could not longitudinal rows of stitching be sewed through the borders of this fabric, if such borders were not flattened at all?

A. If the material was not flattened at all at the border, it would, as I understand it, be more or less fluted at those portions, and in such case, I doubt whether rows of stitching could be put through the fluting by means of a sewing-machine, without the fluting being obliterated, although rows of stitching might be put in by hand, without smoothing out the material so as to obliterate the flutes.

X. 45. In the trimming described in "Exhibit Re-issue 3,000," must there not be a central portion between the fluted parts, which is not fluted, and not pressed flat like the flattened borders, and which has what is called in the patent a puffed or crinkled surface?

A. There must be such a central portion between the parts which the fluting-teeth operate upon; but I think it makes no difference whether such portion is regularly fluted or is crinkled or wavy irregularly. It must, however, have a protuberant or puffed appearance, and it must not be pressed as flat as the flattened borders may be pressed,

442 although made flatter than it would be if the surfaces of the central portions of the rollers should not act upon it.

X. 46. Is that the only answer you can give to that question?

A. I might add to the above that the central portions of the two breadths of fabric represented at figure 4 are not represented as having been operated upon by fluting-teeth, and if the word "fluted" is assumed to mean operated upon by fluting-teeth, than those central portions are not, in that sense, fluted.

X. 47. Are not the fluting-rollers described in "Exhibit, Re-issue 3000," particularly constructed and shaped with reference to the formation of and for the purpose of producing, in connection with the guide, such central portion of the trimming, having, as mentioned in such exhibit, a crinkled or puffed appearance?

A. They are particularly constructed for the purpose stated in the question, among others.

X. 48. Explain what you mean by the last two words, "among others."

A. The other purposes are the fluting of certain portions of the fabric by the operation of the fluting-teeth and the enabling of certain other portions of the fabric to be flattened sufficiently to enable rows of stitching to be inserted therein.

X. 49. As you understand the patent "Exhibit, Re-issue 3000," is the

object or purpose of pressing flat the borders outside the fluted rows to enable rows of stitching to be inserted therein?

A. I understand it to be so, but the question don't express the whole purpose, which is to enable rows of stitching to be inserted so as to render permanent or secure the fluted or puffed conformation of the part between the sewed portions, so that laundrying may not obliterate the fluted or puffed construction of the fabric.

443 X. 50. Refer again to the patent "Exhibit, Reissue 3000," and state whether the fabric is not pressed flat at its flattened borders to render permanent its configuration.

A. As I understand the language of the patent it is not pressed flat for that purpose; that purpose being effected by the rows of stitching. I understand that the language of the patent amounts to saying that the borders are pressed flat to permit of the insertion of rows of stitching, by which the conformation of the fabric is rendered permanent. The flattening is incapable of rendering the conformation permanent, because a slight longitudinal strain upon the fabric would extend it and destroy the conformation if there were no rows of stitching to render the conformation permanent.

Adjourned to 18th inst., at 11.30 a. m.

WEDNESDAY, *December 18th*, 1872.

Present, counsel as before.

Continuation of the testimony of Edward S. Renwick:

X. 51. If the trimming described in "Exhibit, Re issue 3000" is used for shirt-bosoms in the manner shown in the "Exhibit, Hermann & Lautenbach," is it not necessary to stitch the trimming at either side to the shirt-bosom, and in such case would there be any necessity of inserting rows of stitching along the flat borders, to render the conformation of the trimming permanent and to prevent the result as is referred to in the last part of your last answer?

A. In the "Exhibit, Hermann and Lautenbach," the puffing is stitched at each side to the other parts to the shirt-bosom, the stitching being located along the flattened borders of the puffing and rendering the conformation permanent. In such case there is no necessity of

444 a previous row of stitching being inserted in the flattened borders, if the fabric is carefully handled, until it is stitched fast to the residue of the shirt-bosom; but in the absence of such previous row the conformation is not rendered permanent until the insertion of the rows of stitching, which run along the flattened borders and perform the double purpose of rendering the conformation permanent and securing the fabric to the other parts of the shirt-bosom.

X. 52. If the trimming described in "Exhibit, Re-issue 3000," after it is delivered from the machine, is properly and carefully handled in inserting it in any article of dress, will not the flattening of the borders, if such borders are pressed flat—that is, as I understand it, flattened down, and not partially flattened—sufficiently preserve the conformation of the trimming to enable the trimming to be inserted in any article of dress?

A. Of course, if sufficient care is exerted in handling the fabric, the conformation will be sufficiently preserved to enable the fabric to be inserted in any article of dress.

X. 53. I understand you as saying, in the machine described in "Exhibit, Re-issue 3000," and sometimes called the King machine, the upper plate of the guide serves the purpose to hold the material passed through

between the two plates of the guide, in contact with the curved surface of the lower plate of the guide?

A. It does produce that effect, and causes the material to be curved transversely in correspondence with the curvature of the lower plate of the guide.

X. 54. The machine described in "Exhibit, Re-issue 3000," after the material has been passed through the guide, and into and between the rollers, and the machine started, will continue to operate and perform its work so long as power is applied and material or fabric supplied, without any continued attention or assistance of an operator being required, will it not?

445 A. I think it would, so far as the feeding and the fluting of th fabric are concerned; but I believe that it would not deliver the fabric without the assistance of an attendant, unless some stripping-instrument were added to the machine represented in the drawings of the patent, as there does not appear to be any instruments for causing the fabric to separate from the lower rollers.

X. 55. Do you mean that the trimming will not practically discharge itself from the machine without the aid of a stripper or an operator?

A. If the trimming be an article containing dressing or starch which is softened by dampening before the material is fed to the machine, and is hardened by the heated rollers, I do not think it would be safe to trust the machine to deliver the fabric without a stripper of some kind, or without the presence of an attendant to ensure the delivery, as the presumption is that the fabric would adhere to the lower roller and be carried around to the front side of the machine. If the material operated upon were soft goods I think that the material might possibly be delivered without the use of a stripper or an attendant.

X. 56. How many times have you witnessed the operation of the defendant Werner's machine, made like the model "Exhibit, Werner Machine?"

A. I was at his place on two occasions, and saw a machine like the "Exhibit, Werner Machine," operated practically, the rollers being heated up and the material being dampened before it was applied to the machine. I also saw the machine operated on some short pieces at my office when the machine was cold and the pieces were dry.

X. 57. In the "Exhibit, Werner Machine," and in the machines you saw operated at M'r Werner's place, are and were there not a pair of fluting-rollers constructed with two rings of fluting-teeth separated by a broad open space, and having at their outer side two smooth zones or rings?

446

A. There are and were a pair of fluting-rollers constructed substantially as stated in the question.

X. 58. Such fluting-rollers in those machines are substantially like in form and construction with the fluting-rollers described in "Exhibit, Re-issue 3000," are they not?

A. Yes; they are.

X. 59. In such Werner machine are there not devices operating as pressers, for flattening the fabric in connection with the narrow annular zones or rings?

A. There are pressers operating as stated in the question.

X. 60. In such Werner exhibit and machines is not the pressure-spring or pressure-toe, as it has also been called in this case, placed opposite, centrally, to the broad open space of the fluting-rollers between the fluting-teeth?

A. The pressure-spring is placed as stated in the question.

X. 61. In the operation of such Werner exhibit and machines, the material or fabric, before passing to the rollers, passes between two metallic surfaces or fixtures, which serves to keep the fabric in position, does it not?

A. In said machines the material or fabric, before passing to the rollers, passes at one portion of its breadth between two metallic surfaces, which pinch it between them and detains the central portion of the fabric from passing to the rollers as fast as it would otherwise. But said surfaces do not keep the fabric in its position, and the attendance of an operator is required for that purpose.

X. 62. To what two metallic surfaces do you refer *to* in your last answer? Describe them with reference to the "Exhibit, Werner Machine."

447 A. The two surfaces to which I referred are the under surface of the pressure-spring and the upper surface of the flat plate upon which the said pressure-spring bears when there is no material passing to the rollers.

X. 63. Before the material or the fabric reaches the location of the pressure-spring, does it not pass over a metal bar, and underneath a metal plate, and between two standards, which act together as a sort of guide to the material in passing to the rollers?

A. Before the material passes to the position of the point of the pressure spring, it is passed over a round bar, which is straight throughout that portion which the fabric touches; it also passes beneath the edge of the flat bar which holds the pressure-spring in its place, and it passes between two standards, which hold the said flat bar last mentioned in its place, but have no action whatever upon the material, as they are so wide apart that the material does not approach either of them. If the term "sort of guide" includes every kind of device which can be placed in advance of fluting-rollers, for the purpose of operating upon the material passing to said rollers, then the round bar and the flat bar mentioned by me may be said to form a sort of guide.

X. 64. In the "Exhibit, Werner Machine" do not the round bar, the flat bar, and the standards serve to keep the material in proper position in front of, and guide it to, the rollers; is not that, in your opinion, the purpose of such parts of the machine?

A. In the said Werner machine the standards referred to, which I understand to be those which connect the flat bar, before mentioned by me, with the plate beneath, have no action whatever upon the material passing to the rollers, and do not act in any manner whatever to keep the material in proper position. The round bar and the flat bar enable the operator to keep the material flat throughout its whole breadth, as it is drawn towards the pressure spring. The edge of the flat

448 bar enables the operator to hold the material in a certain vertical position relatively to the rollers. The round bar has no action whatever in guiding or directing the material to the rollers, but simply enables the operator to keep the fabric spread out horizontally throughout its whole breadth, before its passes to the pressure-spring. And for this purpose it might just as well be set closer to the rollers, than to the edge of the flat bar before referred to, so that the fabric might actually move away from the rollers in passing from the round bar to the edge of the flat bar, or the round bar might be set higher or lower than it now is.

X. 65. I understand your answer then to be that the standards, so called, do not act in any manner to keep the material in position or to guide it to the rollers, but that the flat bar and the round bar enable

the operator to keep the material in proper position before being acted upon by the pressure-spring and passing between the rollers?

A. Your understanding as respects the standards is correct. Your understanding as respects the round bar is not correct, as the operation of that bar is simply to enable the operator to keep the material spread out flat throughout its whole breadth, it being a matter of no importance what position the material has relatively to the rollers or to the pressure-spring, while it is passing around the round bar. As respects the flat bar, that enables the operator to keep the material in the place where its edge happens to be while the material is passing to the pressure spring, and thence to the rollers, but there is no particular proper position in which the material must be held when it is passing across the edge of the said flat bar.

X. 66. Is it necessary in the action of the "Exhibit, Werner Machine" that the material should be kept flat throughout its whole breadth, as it is drawn towards the rollers?

449 A. It is necessary that the material should be kept flat throughout its whole breadth at some point before the pressure-spring operates upon it on its way to the rollers, but it is not necessary or proper that it should be kept flat throughout its whole breadth, for its whole length, from the round bar to the rollers, as it is drawn towards the rollers.

X. 67. And I understand you to say that the round bar and the flat bar enable the operator to keep the material flat throughout its whole breadth, as it is drawn towards the pressure-spring; am I correct?

A. You are correct in understanding that the round bar and the edge of the flat bar enable the operator to keep the material flat throughout its whole breadth as it is drawn towards the pressure-spring; but I have not meant to convey the idea that this flat condition is maintained all the way up to the pressure-spring.

X. 68. When you saw in Mr. Werner's place of business working machines like the "Exhibit, Werner Machine," in operation, what was the breadth of the strips of material which was passed into and through the machine?

A. I did not measure them, but I should estimate them from memory to be not less than four inches wide nor more than five inches. They were wide enough to form two breadths of trimming simultaneously.

X. 69. In such machines which you saw working there what was the distance between the vertical standards that supported the flat bar, so called?

A. I am not able to state, but I may say that the machine was broad enough to form four breadths of trimming simultaneously, and the standards were so wide apart that the edges of the material could not touch them while it was held in its proper position by attendant.

X. 70. Did you see any machines there arranged for making single breadths or double breadths of trimming?

450 A. I was shown no other machine but the one I have mentioned.

X. 71. Do you know whether that machine which was shown you was generally used for making four breadths or two?

A. As a matter of fact, I do not.

X. 72. If a strip of material of sufficient breadth to make four breadths of trimming was put in that machine which you there saw, what space, if any, would there be between the edges of such a piece of fabric and the standards referred to? Answer as nearly as you can as to the extent of such space.

A. I should estimate the distance between the edge of the fabric, in such case, and the standards to be about half an inch; but as I made no measurements at the time my estimate may be wrong.

X. 73. Will you again look at the machine shown you by Mr. Werner and measure the distance between the standards, and also get the breadth of a piece of fabric such as is generally used in making four breadths of complete trimming?

A. I will do so, if permitted.

X. 74. In the "Exhibit, Werner Machine," and in the operation of the machine you saw at Mr. Werner's place, does and did not the pressure-spring by its action cause a greater fullness of material in that portion of the material between the rings of fluting-teeth than there would be if such pressure-spring or its equivalent was not used?

A. The pressure-spring does and did help to cause such effect to be produced, but is incapable of producing it by itself.

X. 75. Please state what you have reference to in your last answer as acting with the pressure-spring to produce such effect.

A. The small portion of the surface of the flat plate between
451 which portion and the toe of the pressure-spring the central portion of the fabric is pinched. Also the fluting-rollers which act antagonistically to the pressure-spring, and draw the margins of the fabric inward while the central portion is detained by the operation of the pressure-spring and the small portion of the plate, between which and the toe of the pressure-spring the material is pinched.

Adjourned to the 19th inst., at 11.30 a. m.

THURSDAY, *December 19th*, 1872.

Present, counsel as before.

Continuation of the testimony of E. S. Renwick.

The witness states:

After the adjournment yesterday, I went to Mr Werner's shop, and made the following measurements, which were required by cross-question 73:

The space between the standards which hold the flat bar in its position is eight and seven-sixteenth' inches; the inner face of one of the standards being in the same line as the inner side of the frame of the machine, and the inner face of the other standard being one-sixteenth of an inch, inside of the line of the inner side of the frame, at that side of the machine.

The breadth of the fabric used in making four rows of trimming, simultaneously, was eight and a quarter inches.

X. 76. In the Werner machine, the fluting-rollers are arranged with respect to each other, and are operated in the same manner as are the fluting-rollers in the King machine described in "Exhibit, Re-issue 3000," are they not?

A. The arrangement' in both cases are the same as in any ordi-
452 nary fluting-machine, with one roller above the other, and with their teeth gearing into each other, the journals of both rollers being arranged to turn in a frame, which holds them together. In both cases the rollers are turned to carry the material that passes through between them. In the machine at Mr Werner's shop the rollers were caused to turn by means of a crank worked by an operator.

X. 77. You say that in the manufacture of the trimming on the Werner machine the fluting-rollers act to draw the margin of the

fabric inward. Do not the fluting-rollers in the King machine act to draw the fabric inward?

A. They do, using the term "inward" in one sense, but not in the same sense in which I use it in speaking of the operation of the Werner machine.

In the Werner machine the rollers operate to draw the margins of the fabric laterally inward towards the central line of the fabric, as well as to draw the fabric inward between themselves, in the direction of the length of the fabric.

In the King machine the rollers operate to draw the fabric inward between them, in the direction of the length of the fabric, but the lateral narrowing of the fabric, by which its margins are brought in nearer the central line of the fabric, is effected by the peculiar operation of the guide E, and the fabric, when so narrowed, passes directly to the fluting-rollers, which draw the narrow fabric in between them.

X. 78. If the fluting-rollers in the Werner machine act in the forming of the fullness of the material in the central portion of the material, by drawing the margins of the fabric inward, is not such action rendered necessary in the completion of the trimming by the action of the pressure-spring in detaining the material?

A. I think that the language of the question does not express the state of facts correctly.

453 The operation of the rollers in the Werner machine, in drawing the margins of the fabric inward, is due to the fact that the rollers are combined with the pressure-spring in such a manner that the latter obstructs the movement of the central portion of the fabric, while the margins are not obstructed save by their connection with the central portion.

If there was no obstruction whatever to the movement of the central portion of the fabric in the Werner machine, the rollers would not produce any material effect in drawing the margins of the fabric inward, towards the central line thereof.

X. 79. If there was no pressure-spring or its equivalent in the Werner machine, would there be any fullness of material produced in the central portion of the trimming between the fluted lines?

A. If there were no pressure-spring in the Werner machine, and the machine was in other respects unaltered, and the material was fed to the machine in the same manner as it is when the spring is in place, there would be no material fullness in the central portion of the fabric—by which I mean there would be no more fullness in that portion than would result from the peculiarities of the rollers.

X. 80. In the Werner machine are not the parts which act with the narrow annular zones to produce the flattened borders, arranged so that their pressure can be adjusted, or the distance between such parts and said zones varied?

A. The parts or pressers in the Werner machine, which act in connection with the narrow smooth zones, are connected with screws, so that the pressure upon the fabric can be varied if desired, or the space to which the pressers can separate from the surfaces of the smooth zones can be varied by the adjustment of the screws.

454 X. 81. When first did you know of the machine "Exhibit, Weitling Machine," either with or without the other exhibits "Weitling Board," "Weitling Standards," and Weitling Bar," and is your knowledge of all such things dated from the same time?

A. Since some weeks back, I cannot recollect the exact date, but can give it if necessary by reference to memoranda now at my office. I first

saw the "Exhibit, Weitling Machine," and some of the separate parts appertaining to it; afterwards I saw the "Exhibit, Weitling Bar," "Weitling Board," and "Weitling Standards."

X. 82. Have you ever seen in practical operation a machine like the "Exhibit, Weitling Machine," in all respects, having a bar like the "Exhibit, Weitling Bar," used with it, or have you personal knowledge of the use of such a machine?

A. I have never seen a machine in all respects as stated in the question used in the regular manufacture of articles, although I have seen short pieces of fabric run through it, and have run such pieces through it myself for the purpose of testing its mode of operation. I have no other personal knowledge of the use of that machine, or one like it in all respects.

Adjourned to 20th inst., at 11 a. m.

FRIDAY, *Dec. 20th*, 1872.

Present, counsel as before.

Continuation of the testimony of E. S. Renwick.

Further cross-examination of this witness adjourned until further notice.

Adjourned until January 7th, 1873.

455 TUESDAY, *Nov. 11th*, 1873.

Present, Orlando Dorsey, esq., counsel for defendants, and M. A. Kursheedt, esq., counsel for complainant.

Cross-examination of Simon Muller continued:

X. 23. Have you in your possession a piece of trimming similar to the trimming mentioned by you in your answer to question 13?

A. No, sir.

X. 24. Describe fully the trimming or trimmings which you refer to in your answer to question 13.

A. It is a diamond trimming, fluted on both sides, and in the centre the diamond.

X. 25. Do you mean to say, by your last answer, that said trimming had a row of flutes on each edge, and between said rows of flutes the goods were embossed in a diamond shape?

A. Yes, sir.

X. 26. Was there any space between the edges of the diamond-shaped embossing and the inner edges of said rows of flutes in said trimming?

A. There was a small space each side of the diamond-shaped embossing.

X. 27. How wide were the small spaces you refer to in your last answer?

A. About a sixteenth of an inch.

X. 28. How were said flutes and embossing kept in position?

A. They were stitched by a sewing-machine after they were embossed.

X. 29. Do you mean to say, then, that said trimming, when finished, presented the following appearance, that is: commencing at
456 either edge there would be found, first, along the edge a row of flutes, then a plain space in which stitches were inserted, then a central space embossed in diamond shape; next another plain space, in which stitches were inserted, and finally on the other edge another row of flutes?

A. Yes, sir.

X. 30. Where did you obtain the embossing-rings marked "Exhibit, Muller, No. 4" and "Exhibit, Muller, No. 5"?

A. I had the whole machine made in Newark—rings, fluting-machine; the whole machine made in Newark.

X. 31. By whom, in Newark, were they made?

A. I can't recollect the name. I have the name at home. It is down in Market street, Newark. I now recollect the name. It is Burgh.

X. 32. What has become of the rest of the machine to which said exhibits "Muller, No. 4" and "Mullar, No. 5" belonged?

A. I can't tell where the machines went to. They were all sold. M'r Werner bought two and M'r Wuterick bought two.

X. 33. How came you to keep in your possession said two embossing-rings?

A. I did not have them in my possession.

X. 34. How are you able to know that said two embossing-rings were used in a fluting-machine in 1862?

A. Well, sir; I ordered the machines and had them made in 1863, and worked them afterwards.

X. 35. State how you are able to recognize said exhibits "Muller, No. 4" and "Muller, No. 5" as being the identical embossing-rings which you say you used in 1863.

A. It is my best opinion that they are the same identical ones. I took them out of the machine at M'r Werner's place of business.

X. 36. Were you and M'r Werner, the defendant in one of
457 these suits, ever in business together? If so, state when, for how long, and what were the relations between you.

A. Yes, sir; we were together. I worked for wages and commission. We stayed together about six months; I think it was in 1870.

X. 37. In what condition was the machine in from which you took said embossing-rings, exhibits "Muller, No. 4" and "Muller, No. 5," at the time you took them from the machine?

A. The machine was in working order.

X. 38. How long ago is it that you took said rings from said machine?

A. To the best of my recollection it was in 1870.

X. 39. For what purpose did you remove said rings from said machine in 1870?

A. We were going to use it for a plain fluting-machine—put two plain rings in it and use it for a plain fluting-machine with breaks.

X. 40. Were there any plain rings in said machine before you took out the embossing rings in 1870?

A. No, sir.

X. 41. Was the guide marked "Exhibit, Muller, No. 5," for a guide exactly like said exhibit in all respects, used in connection with the machines you say you had made in Newark and which had embossing-rings on their rollers?

A. Yes, sir.

X. 42. Was the guide "Exhibit, Muller, No. 5, or any guide similar in all respects to said exhibit, ever used with any fluting-machines, except such as had on their rollers embossing-rings similar to exhibits "Muller, No. 4" and "Muller, No. 5?"

A. Used guides, but the piece in the centre was off—that is, on a plain fluting-machine.

X. 43. Do you mean "by the piece in the centre" referred to in your last answer, the protuberance of a parabolic section, marked by
458 the examiner with the word "knob?"

A. Yes, sir.

X. 44. Please read question 6 and 7 of your examination and your answers thereto, and state whether you now consider those answers entirely correct.

A. I have read them and they are correct.

X. 45. Is there any difference between the guide you described in the latter part of your answer to question No. 7, commencing with the words "the next one" and the guide marked "Exhibit, Muller, No. 5?"

A. There is no difference.

X. 46. Is there any difference between the exhibits "Robjohn Machine" and "Werner Machine" on the one hand, and the machines to which embossing-rings like exhibits "Muller, No. 3" and "4" belonged on the hand?

A. There is a difference; the "Exhibits, Robjohn Machine" and "Werner Machine" have no embossing-rings.

X. 47. Have not the exhibits, "Rolejohn Machine" and "Werner Machine" plain rings between and outside the row of flutes, while the machines you have referred to as having embossing-rings have no such plain rings?

A. Yes.

X. 48. Then you never saw guides or *guages* exactly like "Exhibit Muller, No. 5," fastened to machines substantially like "Exhibit, Robjohn Machine" and "Exhibit, Werner Machine?"

A. None, except those I made myself in 1863.

X. 49. Do you mean to say that you made or saw in use in 1863 *guages* or guides exactly like "Exhibit, Muller, No. 5," with what is called the "knob" thereon, fastened to machines substantially like "Exhibit, Robjohn Machine," and "Exhibit, Werner Machine?"

A. Yes, sir; I used them in 1863, but the machines to which
459 said guides were fastened had embossing-rings on them like exhibits "Muller, No. 3" and "No. 4," and had no plain rings.

X. 50. Then the machines to which said guides were fastened, were not exactly like "Exhibit, Robjohn Machine," and "Exhibit, Werner Machine?"

A. No, sir; they were not.

X. 51. When you said, in your answers to questions 7, 10, and 11, that guides represented by exhibits "Muller No. 1" and "No. 2," and which you now say is the same device as "Exhibit, Muller, No. 5," were fastened to machines similar to exhibits "Robjohn Machine" and "Werner Machine," you meant merely to designate generally the kind of machine to which said guides were fastened, without reference to the configuration and construction of the fluting-rollers or the other attachments to the machines?

A. The "Exhibit, Muller No. 5," is made in two parts; the part without the "knob" was used with machines like exhibits "Robjohn Machine" and "Werner Machine," but the two parts combined were only used with the machines above described, which had no plain rings but had always embossing-rings like exhibits "Muller, No. 3," and "Muller, No. 4," so far as I know.

X. 52. Question 51 repeated.

A. I meant to say that those guides were used with fluting-machines. I did not refer in those answers to the exhibits "Robjohn Machine" and "Werner Machine."

Redirect:

X. 53. When you use the word "embossing" do you mean raised

work such as can be produced by exhibits "Muller No. 3" and "4," and such as is found in the centre of the "Exhibit, King Puffing," or what do you mean?

460 (Objected to as leading, and because the question assumes that there is found any embossed work in the "Exhibit, King Puffing.")

A. That work that I made was quite different from that of M'r King's. It was raised up in the centre in the shape of a diamond.

Q. 54. Do you mean that it was different in its shape, or what do you mean?

(Objected to as leading.)

A. It was different in the shape.

Q. 55. Could the fluting-machines used by you with the diamond rings be used without those rings? Could they be used with rings of other designs, or with plain rings, just as well as with diamond rings?

A. It can be used just the same.

Q. 56. Did you ever use those machines without the diamond rings?

(Objected to as improper on redirect.)

A. I have used fluting-machines without diamond rings.

Q. 57. Did you ever use a fluting-machine without diamond rings in connection with gauges?

A. Yes, sir; I did.

Q. 58. How long ago?

A. As near as I can recollect, in 1862 or 1863.

Q. 59. Where did you use them?

A. Down in Warren street. I don't remember the number. It was between Church street and College Place, in the city of New York.

Recross:

X. 60. You said, in answer to question 55, that the fluting-ma-
461 chines used by you with the diamond rings could be used without those rings, or with rings of other designs, or with plain rings. Would you not have to take such machines apart in order to change the rings, and would they not then be substantially altered?

A. Of course you would have to take them apart to put the other rings in; they would be altered, of course.

SIMON MÜLLER.

Subscribed and sworn to before me this 11th day of November, 1873.

S. E. STILWELL, *Examiner.*

The objection to the evidence of the witness, on the ground that the answer gave no notice of said witness or the nature of his testimony, is now withdrawn.

MONDAY, *Nov. 17th*, 1873.

Present, counsel as before.

Caroline Weitling, a witness, appears for cross-examination.

The interpreter not being present, the further cross-examination of the witness is adjourned to the 18th inst., at 11½ a. m.

462 TUESDAY, *Nov. 18th*, 1873.

Present, counsel as before.

Continuation of the cross examination of Caroline Weitling.

X. 154. How long was your husband busy in inventing his machine that you have spoken of in your previous testimony?

A. He had worked on it for several years.

X. 155. What did he call his machine? What kind of a machine did he call it?

A. A crimping-machine.

X. 156. Did he ever make with that machine any articles of crimping or trimming for sale?

A. Only for samples and patterns.

X. 157. State when, at what particular time, the two pieces now shown you, marked "Ex., Weitling Puffing, No. 2," were made. I mean those identical pieces were made, if you know.

A. I made them myself on the machine some two or three years ago.

X. 158. Do you mean to be understood by your last answer that you made these same two pieces, "Exhibit, Weitling Puffing No. 2," two or three years ago, or pieces of trimming like these two pieces shown you?

A. I think they were the same.

X. 159. Where have these pieces, I mean these identical pieces, "Exhibit, Weitling Puffing, No. 2," been kept since you made them two or three years ago? Have they been in your possession? And who did you give them to and when?

A. I delivered them to M'r Dorsey just after I had made them.

X. 160. Where were those pieces made, and was any person with you at the time they were made?

463 A. They were made in my house where I dwell now, and my sister and my brother were present.

X. 161. How long was it after those pieces were made by you that you gave them to M'r Dorsey, as you say?

A. I gave him some samples immediately, but whether it was these exhibits I cannot say.

X. 162. Did you give M'r Dorsey samples at different times; and, if so, how many times?

A. I don't remember exactly. I think I gave him some when I made them, and some later. I can't say how many times.

X. 163. You have testified before this that you put on your bonnet some of the trimmings that you made experimental with that machine. Please state when, the year and the month, if you can, when you placed that article on your bonnet for wearing?

A. I made the trimming in 1855 out of which I made hat in the spring of 1865.

X. 164. What had been done with trimming that you say hac been put on your hat in 1865, after it had been made in 1855, as you say? What had been done with it between 1855 and 1865?

A. It had been laying in a glass case, without being touched.

X. 165. Where did you live in 1855?

A. At No. 126 Allen street.

X. 166. How long did you live there?

A. From January to the next May, a little over a year.

X. 167. Was that until May, 1856?

A. I think it was until 1857, but I am not sure.

X. 168. To what street and number did you move when you left 126 Allen street, and how long did you live in the place you then went to?

A. I moved to 195 Avenue B, corner 12th street, and lived there from three to four years. I can't say exactly.

464 X. 169. To what place did you move when you left 195 Avenue B, and how long did you live in the place you then went in?

A. I think it was 127 Avenue A, corner of 9th street, and we lived there about two years, I think.

X. 170. To what place did you next go, and how long did you live there?

A. We moved to 107 on the same avenue, near 8th street, and lived there about two years.

X. 171. Where did you next move, and how long did you live there?

A. We went from there to Houston street, across Norfolk. I don't remember the number, and lived there for one year.

X. 172. How long have you lived at your present place of residence, and is your present place of residence 360 Grand street?

A. I have lived there one year and six months, and it is 360 Grand street.

X. 173. Please state the different places you lived at after you left Houston street and before you went to Grand street, where you now live, and how long you lived at each of such places?

A. I lived for four years at No. 26 Norfolk, and then at 168 Stanton street for about four years, and from there I moved to Grand street.

X. 174. Can you give the names and residences of the persons from whom you hired the premises you have lived in? Please do so, beginning at the house in Allen street.

A. No. 126 Allen street from M'r's Davidson, in the same house; M'r's Davidson left the house, and M'r's Ives came afterwards and left too. In 195 Avenue B, from M'r George Will, who still lives in the same house. In 129 Avenue A I rented from M'r James Eagen, who lived in same house, and lives there now, I believe. At 107 Avenue
465 A I rented from M'r Vallmer, who lived on the premises, and lives there still, I think. At Houston street, from M'r Jordan, who still has his business in the next house. At 126 Norfolk street I rented from M'r Bailey, Henry, I think; his office is in Broome street, near the Bowery. At 168 Stanton street I rented from M'r Adam Dietz, who lives on 1st Avenue near 4th street. I don't remember the number.

X. 175. At what place were you living in 1865 when you put this trimming on your bonnet?

A. I commenced to make the hat up in Houston street and finished it in Norfolk street.

X. 176. How came you to use that trimming at that time on your bonnet?

A. Because it was the fashion to wear fulled ribbons at that time, and because these ribbons were puffed so nicely I chose*d* to wear them.

X. 177. As you had kept those ribbons for ten years, as you say, why did you then put them on to wear them out?

A. Because I could use them very well for the purpose of making a fashionable hat.

X. 178. And there had been no use to which you could put them during the ten years before that time. Am I correct or not?

A. The hat fashion did not come up until that time, and I could not use them for garments.

X. 179. Your husband, before his death, made an application to the Patent-Office of this country for a patent for his invention, did he not?

(Objected to on the ground that the best evidence would be the record of the Patent-Office.)

A. Yes; through M'r M*c* Intyre.

X. 180. When was that application made through M'r McIntyre?

(Same objection.)

466 A. I think it was about three months before my husband

died. I think in October or November, 1870. He died on the 25th of January, 1871.

X. 181. Did not your husband make an application for a patent for his invention before 1870; and, if so, when first did he make an application for his invention?

(Same objection.)

A. In 1855 he made his first application.

X. 182. Did he get any patent for his machine on that application; and, if not, do you know the reason why he did not?

A. He did not. There was some mishap in making out the papers. An account of the papers were not properly made out.

X. 183. Your husband did not do anything further for getting out a patent for his machine until he made his application in 1870, through M'r McIntyre, did he?

(Same objection.)

A. No. He sent a machine to Washington in order to prevent anybody from taking out a patent, to keep the monopoly for himself.

X. 184. When did M'r McIntyre become interested or the part owner of M'r Weitling's invention and the patent for the same?

A. It was near the end of 1870 when M'r McIntyre wrote to my husband about the interest he would take in his patent.

X. 185. Have you M'r McIntyre's letter?

A. I can't tell for sure.

X. 186. Will you please look, when you go home, to see if you can find the letter of M'r McIntyre you refer to; and, if you can, will you please send it to the examiner, R. E. Stillwell, to be attached to your deposition; and, if you cannot, please send a letter to the
467 examiner, stating that you cannot find it. Please make careful search for the letter.

A. I'll do so.

X. 187. What did M'r McIntyre give for his interest in that invention-patent?

(Objected to on the ground that M'r McIntyre was the counsel of Mr. Weitling, and the relations between Mr. Weitling and his counsel are confidential and privileged, and not admissible in evidence in this case.

The counsel for the defendants ask M'r Law, the counsel for the complainants, and the witness, as a preliminary question to the one just asked of the witness, whether the contract between M'r McIntyre and her husband was in writing, and, if it was in writing, the counsel for the defendant objects to any parol evidence of the nature and contents of the written agreement on the ground that the written contract should be produced or its loss accounted for.

Counsel for complainant, although not sworn as a witness in the case, says, in reply to the question put to him in the last objection taken, that he don't know anything about the agreement made between M'r Weitling and M'r McIntyre in respect to the sale to and purchase by M'r McIntyre, and whether such agreement was in writing or not; and as to the question put by defendant's counsel to the witness, counsel for complainants says that he is now examining the witness, and does not admit the right of defendant's counsel to interrupt such examination by putting questions to the witness, and that, if defendant's counsel
468 wishes to put any questions to the witness with respect to this agreement, he can do so when the cross-examination of the witness is finished, and complainant's counsel requests the questions to be put to the witness as he has put it, and the witness to answer the same without answering any questions put by defendant's counsel.)

A. So far as I know, nothing.

X. 188. State why, for what reason, M'r McIntyre wished to obtain an interest in that invention and patent.

(Counsel for defendant objects to this question and this whole line of questions on the ground that there is nothing in the direct evidence to authorize this line of cross-examination.)

A. I think he thought it was a very valuable invention and patent, and therefore he wanted half interest in it.

X. 189. Did M'r McIntyre write more than one letter to your husband with reference to becoming interested in this invention and patent; and, if so, how many letters did he write about it? State as correctly as you can.

(Same objections.)

A. He wrote at different times, but how many letters I cannot say.

X. 190. Will you please try and find all those letters of, and that correspondence with, M'r McIntyre, as to obtaining an interest in that patent, and send the same to the examiner, as before requested, and if you have copies of the letters written to M'r McIntyre by your husband, will send the copies of such letters also?

469 (Same objections as before, so far as the objections refer to the correspondence between M'r Weitling and his counsel.)

A. I will do so.

X. 191. Did you see and read those letters from M'r McIntyre which he wrote to your husband about obtaining an interest in that invention and patent?

A. I saw them and partly read them.

X. 192. State, according to the best of your recollection, what M'r McIntyre wrote to your husband as to why he wished to become interested in that invention and patent. I ask this question so that, if you are unable to find such correspondence, the court may know something what it was.

(Same objection as to question 190.)

A. I cannot say more than that my husband told me M'r McIntyre wished to become interested in the invention; the reasons I know nothing about.

X. 193. Do you know how your husband became acquainted with or was led to employ M'r McIntyre to make the application for the patent? Who directed your husband to M'r McIntyre, if you know?

A. My husband got the first letter from M'r McIntyre, and so commenced the correspondence about the matter.

X. 194. Do you mean that M'r McIntyre wrote to your husband before your husband made his application in 1870; or that M'r McIntyre first wrote to your husband as to obtaining an interest in the patent; which do you refer to in your last answer?

A. My husband got a letter from M'r McIntyre before he made the application for a patent.

X. 195. You have stated that there was used with your husband's machine, a bar, which is called "Exhibit, Weitling Bar;" was that bar used by itself in connection with the machine, or was any other bar used with that bar?

470 A. Generally, there was another bar used with it; one for feeding the material to the machine and another on which the material was rolled.

X. 196. Were all these bars you speak of in your last answer placed on the same side of the rollers or on different sides of the rollers?

A. All on the same side; where they are placed now, so they were at the beginning.

X. 197. It has been testified that the bar marked "Weitling Bar" was made since or about the time of the commencement of this suit under your direction and is like a bar actually used with your husband's machine some years ago; is that the fact?

A. It is.

X. 198. When the bar in evidence, marked "Weitling Bar," was so made under your direction, how long had it been since you saw the original bar which you supposed this bar, "Exhibit, Weitling Bar," is like?

A. I had seen the original bar about a year and a half ago, when we moved to the place we live now. In moving, the bar was lost or burnt up by some strangers I had around the place.

X. 199. This bar, "Exhibit, Weitling Bar," was then made from your disposition of the original bar as you remembered about it, was it?

A. It was.

X. 200. Did you have that new bar made at your own suggestion or wish, or did somebody request you to have it made; and, if so, who talked with you about it and asked you to have it made?

A. I had it made on my own suggestion, in order to have the machine perfect.

X. 201. Did anybody come to see you about that machine and talk with you about it, just or a little while before the time you had that new bar made?

A. I told Mr. Dorsey that I had a stand for the machine and could perfect the machine so as to have it shown; then I had the bar made to complete it.

471 X. 202. Did anybody else besides M'r Dorsey talk with you about that machine a short time or a little before you had that new bar made?

A. I don't remember that any one else has spoken to me about the machine before I had the new bar made.

X. 203. You have stated that you believe you made the two pieces of trimming marked "Exhibit, Weitling Puffing, No. 2." At whose request did you make those?

A. I made them in my own interest, as I had a wish to get a patent.

X. 204. Do you mean to be understood that you made those pieces "Weitling Puffing, No. 2" at your own suggestion and without anybody having asked you to make them?

A. I made them on my own suggestion, and cut those pieces off to send them here. I also gave some pieces to M'r Ropes.

X. 205. Had M'r Ropes requested you to send some pieces to him and had M'r Dorsey requested you to send some pieces to him?

A. M'r Dorsey requested me to do so, and I sent them to M'r Ropes at my own account.

X. 206. How long after you made those pieces did you send specimens to M'r Ropes?

A. I think it was about the same week in which I had made them. It was in January, 1872.

X. 207. Had you seen M'r Dorsey before you made those pieces?

A. Yes, sir.

X. 208. When you saw M'r Dorsey, before you made those pieces, what was talked of between you, and was anything said about your husband's machine, and what had been done with it? If so, what was said?

A. I do not remember the contents of the conversation. I saw M'r Dorsey at his office about the machine.

472 X. 209. The machine was talked about between you and M'r Dorsey, was it not?

A. Yes, sir.

X. 210. Did you go to M'r Dorsey's office at his request, or at whose request?

A. At M'r Dorsey's request.

X. 211. Did M'r Dorsey show you at his office, then, samples or pieces of fluted puffing or of trimming?

A. I think I saw some samples there.

X. 212. Did you see there any pieces of trimming like the "Exhibit, King Puffing," now shown you?

A. I saw some like it.

Redirect:

Q. 213. In your answer to cross-question No. 155, you say your husband called his machine "a crimping-machine," and in your answer to cross-question 128 you state "according to my opinion, there is no difference between crimping and fluting; they are substantially the same." Do you speak in the same sense when you say your husband called his machine a crimping-machine?

A. So I do.

Q. 214. In your answer to cross-question 157, you say that the sample shown you, marked "Exhibit, Weitling Puffing, No. 2," "I made them on the machine myself some two or three years ago." State whether you did or did not make other samples besides those exhibits, both before and after that time.

(Objected to as improper on redirect examination.)

A. Since 1855 I have from time to time made different and such samples.

Q. 215. With what did you make such samples from time to time since 1855?

(Same objection.)

473 A. With the machine which my husband had invented and made in 1855.

Q. 216. Did you or not or did or did not your husband send samples like "Exhibit, Weitling No. 3" to Washington to be used in the Patent Office?

(Same objection.)

A. We made all possible kinds of samples with different rings. My husband sent some to Washington, but what kind I don't remember.

Q. 217. State whether or not samples like Weitling puffing No. 2 were sent to M'r McIntyre by your husband or yourself.

A. I sent some myself, but I cannot say whether my husband sent any or not. That was in 1871.

C. WEITLING.

Subscribed and sworn to before me this 18th day of November, 1873.

R. E. STILWELL,
Examiner.

174 *Exhibit No.* 1.—"*Sully Letter, Nov.* 4, 1872, *R. E. S., Ex.*"

No. 70 HIGH ST., SOUTHWARK, LONDON,
June 5th, 1855.

DEAR FRIEND: We arrived safe after a favorable voyage of 21 days,

but I was very ill, and have been so ever since. I am only now beginning to be able to go about any business. I shall not lose any time in pushing your trimmings in the trade. All female dress is said to be much plainer here than it used to be; M'r's S., who has been more out than I have been able to be, says that she has not seen, either in the shops or in the streets, any thing like your trimming; so much the better!

I expect, when I get my tools fixed, I shall be able to make rollers to any pattern for you cheaper than you can produce them in New York.

Please send me youf No. at the post-office. I have mislaid it.

Mrs. Sully joins with me in kind regards.

Yours, truly,

CHARLES SULLY.

Exhibit No. 2.—"Sully Receipt, Nov. 7, 1872, R. E. S., Ex."

M'R WEITLING: I have this day received a complete fancy
475 crimping-machine, which you permit me to use in any part of England, and I engage to pay you, of the money, $\frac{2}{3}$ of the money I shall receive for work done by it during the first year of its operation and $\frac{1}{2}$ of the money I shall receive during the second year.

CHARLES SULLY.

NEW YORK, *April 30th*, 1855.

Exhibit No. 3.—"Miller Bill, Nov. 7, 1872, R. E. S., Ex."

NEW YORK, *May 5th*, 1855.

Bill for Weitling,

by Jos. Müller, Turner,

Consisting of—

2 turned patterns for cross-spindles	$0.36
2 patterns for side pieces	0.12½
2 iron bearings finished as patterns	0. 6
96 pieces brass rings, turned, at 46 cts.	3.84
17 hours cutting teeth, at 1 sh	2.12½
2 pillow blocks and spindles	10.00
Finishing 2 spindles and crank	36
6 rings turned over	06
Irons put on a trunk	06
	$16.99

Payment received.

(Signed) JOSEPH MÜLLER.

476 It is admitted by counsel for all parties that the above is a correct translation of the paper marked "Miller bill, dated Nov. 7th, 1872.

M. A. KURSHEEDT,
Compl'ts' Sol'r.

O. DORSEY,
For Def'ts.

Exhibit No. 4.—"Weissenberger Receipt, Nov. 8th, 1872, R. E. S., Ex."

NEW YORK, *May 12th*, 1872.

The undersigned has this day received a crimping-machine of W.

Weitling's invention, for use, and binds himself to pay two fifths of all the receipts, from work done on the same, in consideration of the right to use the invention, monthly accounts to be rendered and quarterly payments to be made.

The undersigned binds himself to keep the construction of the machine secret as much as possible; not to have a new one made except for his own sole use, and not to sell the same without Weitling's knowledge and consent.

Should this machine be lost, Weissenberger binds himself to pay W. Weitling $50 damages for the same.

(Signed) S. WEISSENBERGER.

I herewith certify that I owe to W. Weitling the sum of four-
477 teen dollars, which he advanced me from the funds of the "Propaganda" on the occasion of my wife's voyage, and for the payment of which I gave my rights as a member as guarantee.

(Signed) S. WEISSENBERGER.

This is to certify that I have received a second machine for the above purpose, and expect to use the same, subject to the same conditions.

(Signed) "S. WEISSENBERGER."

Exhibit No. 5.—"Weissenberger Letter No. 2, Nov. 7th, 1872, R. E. S., Ex."

Mons. Buck has a friend in New York who is going to return to New York late this summer. This would be a good opportunity for forwarding the machine, as he is said to be very reliable for being entrusted with it. If, therefore, he should start in time, give it to him; should he delay, send it before. M'r's Buck yesterday brought us good reports from the stores. The merchants were only sorry not to have had them in spring; but as soon as the business season shall begin they will have dress-trimmings made. At most of the places it is considered excellent, so it is certain that they will also understand how to apply it. We shall soon be busy with the machines; shall be pressed in spring. We are of good courage and the best hopes. So far, 120 cards have been delivered, and M'r's Buck every day makes calls at the stores.

So, my dear, do not tarry, and do what you can. I shall
478 not neglect anything myself, and try to work for you as well as for myself.

Some persons in the stores ask whether straight folds on the ends of trimmings could also be made. For this reason I wish you would forward four broad wheels, cut straight.

Yours,

(Signed) S. WEISSENBERGER.

(On next page the direction of Buck's friend, M'r Eissenmann, to be inquired at his son-in-law's, Schader, tin and iron worker, West Broadway, 145, New York.)

This Eissenmann is coming to Paris.

If Junkel should send my hymn-book, please forward it with the machine.

Exhibit No. 6.—Imperial Commission of the Universal Exhibition, No. 377.

Law of 2d May, 1855.

ARTICLE 1ST. Any Frenchman or foreigner, having a discovery or

invention which may be patented according to the terms of the law of 5th July, 1844, or a design of an article of manufacture, which must be deposited conformably to the law of March 18th, 1806, or their legal representatives, may, if they are admitted to the Universal Ex-
479 hibition, obtain from the imperial commissioner of the exhibition a certificate describing the object exhibited. The application for this certificate must be made during the first month of the opening of the exhibition or later.

ART. 2. The certificate insures to the recipient the same rights which a patent of invention would give him from the date of admission by the local committee of the exhibition, up to May 1st, 1856, even if the admission should be prior to the present law, and without prejudice to a patent which the inventor may take or to a depot he may operate before the expiration of this time.

ACT. 3. The application for certificates must be accompanied by an exact description of the object to be guaranteed, and, if possible, by a plan or design of the said object. The applications also, as well as the decisions of the imperial commissioner, will be entered into a special register, which will finally be deposited with the department of agriculture, commerce and public works.

The delegate commission:

[STAMP OF THE IMPERIAL COMMISSION.] (Signed) SROGNES.

480 *Exhibit No. 7.—French Certificate, November 8th, 1872, R. E. S., Ex.*

UNIVERSAL EXHIBITION OF 1855.

Protection of the industrial designs and of inventions.

Certificate.

The president of the imperial commission certifies to whom it may concern that M'r William Weitling, of New York, (United States,) has exhibited as inventor the article designated below, namely: A machine which serves for crimping different patterns of rollers,* shirt-strips, cuffs, etc.

The description of which is attached to the design, and for which he has demanded the assurance of the exclusive proprietorship dating from the 25th of May last, the day of its admission by the competent committee up to the 1st May, 1856, conformably to article 3 and the following of the general regulations and to the law of May 2d, 1855.

On the evidence of which the present certificate has been gratuitously awarded to M'r William Weitling to serve as of right and without prejudice to the letters-patent which the arbitor may take, or to the depot which he may operate in the ordinary form before the expiration of this time.

Delivered in the palace of the universal exhibition at Paris, 16 July, 1855.

For the president of the imperial commission.

The secretary general signed.

ARLIS DUBAUR.

*"Jabet," used in the French text, means fancy shirt-strips, or shirt-frills, without designating any particular mode or pat'ern of ornamentation.

481 *Exhibit, Werner's Patent.*

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters-patent granted Robert Werner, dated January 7th, 1873, No. 134621, for "Improvement in crimping and fluting machines."

In testimony whereof I, J. M. Thacher, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this fourteenth day of February, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States the ninety-seventh.

[L. S.]

J. M. THACHER,
Acting Commissioner.

No. 734621.

The United States of America to all to whom these presents shall come:

Whereas Robert Werner, of Hoboken, New Jersey, has presented to the Commissioner of Patents a petition praying for the grant of letters-patent for an alleged new and useful improvement in crimping and fluting machines, a description of which invention is contained in
482 the specification of which a copy is hereunto annexed and made a part hereof, and has complied with the various requirements of law in such cases made and provided; and

Whereas upon due examination made the said claimant is adjudged to be justly entitled to a patent under the law:

Now, therefore, these letters-patent are to grant unto the said Robert Werner, his heirs or assigns, for the term of seventeen years from the seventh day of January, one thousand eight hundred and seventy-three, the exclusive right to make, use, and vend the said invention throughout the United States and the Territories thereof.

In testimony whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed at the city of Washington, this seventh day of January, in the year of our Lord one thousand eight hundred and seventy-three, and of the Independence of the United States of America the ninety-seventh.

[L. S.]

B. B. COWEN,
Acting Secretary of the Interior.

Countersigned:

M. D. LEGGETT,
Commissioner of Patents.

483 UNITED STATES PATENT OFFICE.

Robert Werner, of Hoboken, New Jersey. Improvement in crimping and fluting-machines. Specification forming part of letters-patent No. 124621, dated January 7, 1873.

To all whom it may concern:

Be it known that I, Robert Werner, of Hoboken, in the county of Hudson, State of New Jersey, have invented a new and improved combined crimping and fluting machine, of which the following is a specification:

Figure 1 represents a vertical transverse section of my improved crimp-

ing and fluting machine, the line *c c*, Fig. 2, indicating the plane of section. Fig. 2 is a plan or top view of the same. Fig. 3 is a perspective view of the device for holding the fluting against the rollers. Fig. 4 is a vertical transverse section of a modification of my invention; Fig. 5, a face view of the crimping and fluting produced on the machine; Fig. 6, a transverse section, and Fig. 7, a longitudinal section of such fluting and crimping.

Similar letters of reference indicate corresponding parts.

This invention relates to a new machine for producing a fluted and crimped fabric, substantially like that for which a design patent was granted to me on the 29th day of November, 1870, from a smooth and flat woven fabric; and the invention consists principally in the application to fluting-rollers of a detent or finger by which a portion of the fabric is held back, and thereby formed into V-shaped, but more or less irregular, lateral waves and crinkles, whereby the stated and desired effect is produced. This finger is made to bear against a platform over which the fabric is passed to the fluting-rollers, or directly against one of the rollers, as may be desired. The invention also consists in a new arrangement and connection, with said fluting-rollers, of a device for holding the fluted fabric in contact with the same while the crinkled portion of the fabric is being elevated and puffed up by a projecting rib or stationary plate, all as hereinafter more fully described.

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In the accompanying drawing the letter A represents the frame of the machine. In the same are the bearings of two fluting-rollers, B B, which are parallel with each other, and, by preference, in a horizontal position, as indicated. The rollers B are provided with zones, *a a*, of fluting or toothed portions, which will cause certain strips of the fabric which pass between the said rollers to be fluted, while the remaining portions of the same fabric will not be fluted. C is a platform secured to the frame-work A in front of and about in line with the space between the two rollers. D is a detent or spring fastened to a bar, *b*, which rests by posts, *d*, upon the platform C. The free end of the spring, D, bears against said platform midway between the two inner zones, or any pair of zones, *a a*, on said rollers. The fabric is passed over the platform C before it enters the rollers, or rather in its passage to the said rollers, and is consequently passed under and subjected to the pressure of the spring D, being fed or drawn forward by and between the rollers. That portion of the fabric which is subjected to the pressure of the spring D will be detained or held back or stretched back to be drawn into the V-shaped crinkles or crimping, which is indicated in Fig. 5 at *e*. This effect, of course, can only be produced if the detent D bears upon the fabric previous to its being acted upon by the rollers, so that the portion affected by said spring can be drawn back by the detent in the manner shown. The same effect can be produced by the modified form of detent shown in Fig. 4, in which case the said detent is made to bear against one of the rollers, B, and fastened to the under side of a plate, C. This modification can only be used when the detent bears against the rollers so far forward of the line that connects the two axes of the two rollers that sufficient material will be at the command of the detent to draw the fabric back into the V-shaped crimping; for, if the detent would apply to the middle of the roller when the fluting has already hold of the fabric, the drawing back could not be produced, inasmuch as the fluting would take up all the surplus fabric, and none would be left for the effect by the detent. E E are metallic plates or bars provided with projecting cheeks, *f*, which said cheeks bear against

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the fluted portions of the fabric as it emerges from between the two rollers, and hold said fluted portion in contact with the lower roller, while a projecting rib, *g*, moves the center of the crinkled portion from off said roller. This gives the transverse wave of the fabric which is indicated in Fig. 6. The plates or bars E E can, by set-screws *h h*, be adjusted nearer to or further away from the fluted portions of the rollers for the purpose of holding the fluted portion of the fabric more or less firmly against the rollers, and for flattening portions of the fluting between the zones *a*. The rollers may be made to be hollow to be heated by steam or otherwise, so that the fabric which is passed between them, preferably in a moist state, may retain the form into which it is put by the action of the machine. It will be found convenient to raise the detent D off the platform C, (or withdraw it from contact with the roller B, when placed as in Fig. 4,) in order to enter the end of the fabric between the rollers. With this object the bar *b* is made detachable and locked by keys *l l*, (or the plate C made to be drawn back and forward.)

486 Having thus described my invention, I claim as new and desire to secure by letters-patent—

1. The detent D, arranged in combination with the fluting-rollers B B, to produce the crinkles or puffing on the fabric, which is partially fluted, as set forth.

2. The platform C or C′, arranged in combination with the detent D and rollers B, as specified.

3. The cheek-pieces *f* in the plates E, applied, in conjunction with the projecting rib *g*, to the fluting-rollers B B, as specified.

ROBERT WERNER.

Witnesses:
A. V. BRIESEN,
T. B. MOSHER.

487 *Stipulation No.* 1.

U. S. circuit court.

GEORGE E. KING
vs.
ADOLPH HERMAN AND SIMON LAUTENBACH.

SAME
vs.
ALEXANDER LYLE.

SAME
vs.
ROBERT WERNER.

It is stipulated that the defendants in these suits may introduce in evidence the exhibits marked "Robjohn Exhibits" with like effect as if the same had been set up in the several answers herein.

Dated New York, Oct. 23, 1873.

M. A. KURSHEEDT,
Complainant's Solicitor.
ORLANDO DORSEY,
Defendants' Solicitor.

488 *Stipulation No. 2.*

Circuit court of the United States for the southern district of New York.

GEORGE E. KING
vs.
ADOLPH HERMAN AND SIMON LAUTENBACH.

SAME
vs.
ALEXANDER LYLE.

SAME
vs.
ROBERT WERNER.

It is hereby agreed and stipulated by and between the respective solicitors in the above-entitled causes that the several answers filed in the above-mentioned causes shall be considered as amended so as to set up the prior existence and use of the guides, marked "Exhibit S and T" and "Müller Guides, Nos. 2, 3, and 4," in connection with fluting-
489 rollers by Simon Müller and Robert Werner at such times and places as are mentioned by said Müller and said Werner in their testimony in these cases, and so as to obviate any objection to said testimony as not properly pleaded in said answers.

M. A. KURSHEEDT,
Complainant's Solicitor.
ORLANDO DORSEY,
Defendants' Solicitor.

Circuit court of the United States for the southern district of New York.

GEORGE E. KING
vs.
ALEXANDER LYLE.

SAME
vs.
HERMANN LAUTERBACH. } Stipulation.

SAME
vs.
ROBERT WERNER.

It is hereby stipulated and consented that the answers heretofore filed in the above-entitled cases shall be considered as amended so as to admit the evidence of John Andrew Pipo and the evidence of Adolph Hermann, as to the manufacture and sale of the articles of trimming, as mentioned by them, and at the time and places stated by them in their testimony, and no objection to the said testimony shall be taken on the trial on the ground that the same facts therein stated were not set out in the answers.

Dated February 27th, 1874.

M. A. KURSHEEDT,
Complainant's Solicitor.
ORLANDO DORSEY,
Defendant's Solicitor.

490 MONDAY, *Feb.* 23*d*, 1874.

Present, counsel as before.

Continuation of the examination of E. S. Renwick.

Direct resumed:

Defendants' counsel offers in evidence certified copy of letters-patent, granted to Robert Werner, No. 134621, Feb. 14, 1872, for "Improvement in fluting and crimping machines," and the same is marked "Exhibit, Werner Machine Patent."

Q. 83. In the Weitling machine with the "Exhibit, Weitling Spindles," are there not a pair of fluting-rollers constructed with two rings of fluting-teeth, separated by a broad open space and having at their outer sides two smooth spaces?

(Objected to as improper on redirect examination.)

A. There are.

Q. 84. Are, or are not, such fluting-rollers in that machine substantially like in form and construction with the fluting-rollers described in re-issue 3000?

(Same objection.)

A. They are substantially like those described in re-issue 3000 in form and construction.

Q. 85. In such Weitling machine when used with the Weitling bar, is there, or not, a curved implement having a portion of its breadth curved upwards or arched transversely so as to curve the material
491 passed over it, and is not such curved portion of said implement placed opposite centrally to the broad open space of the fluting-rollers but near the fluting-teeth?

(Same objection.)

A. In the Weitling machine, when used as stated in the question, there is a curved implement having a portion of its breadth curved upwards or arched transversely so as to curve the material passed over it on it' way to the fluting-rollers, such implement being that called the Weitling bar, and the portion which is curved upwards being one of the protuberances thereof. One of the said protuberances which is so curved upwards is placed centrally opposite the broad open space of the fluting-rollers between the fluting-teeth.

Q. 86. In the fluting-machine used by Müller, as testified to by him, and with guides like "Exhibits, Müller, 1, 2, and 5" applied thereto, does or does not the material before passing to the rollers pass between two metallic surfaces or fixtures which serve to keep the fabric in position?

(Same objection.)

A. In the said Müller machine, when used with a guide like that represented by the said Müller exhibits, the material or fabric, before passing to the rollers, passes between two metallic surfaces which serve to keep it in its position horizontally, and between two metallic surfaces which tend to keep it in its position vertically. The first two surfaces to which I refer are the raised ledges or strips which are at the edges of the fabric, and the other two surfaces are those of the platform and plate-table thereon.

Q. 87. In the said machine, as used by Müller with the implements like "Exhibits 1, 2, and 5," does not the material, before passing to the rollers, pass between two side-plates, an upper spring-plate, and
492 a lower plate, which, together, act as a sort of guide to the material when passing to the rollers?

(Same objection.)

A. It does.

Q. 88. State whether, as the material is fed to said Müller machine with the said guide, would it or not at some part of its length be kept flat before passing to the fluting-rollers?

(Same objection.)

A. It would.

Q. 89. State whether the said material would or would not be curved transversely at another portion of its length before passing to the rollers.

(Same objection.)

A. The material passing through the said Müller guide on its way to the rollers would be curved transversely in an upward direction before passing to the rollers. And the portion of the length of the material which would be so curved would be that between the spring-plate and the rollers, where the protuberance or knob of the guide is situated, or in other words, that portion of the material which is held flat and the crimping-rollers.

Q. 90. When the guide, like "Exhibits, Müller, 1, 2, and 5," was used in connection with the fluting-machine described by Müller, were or not the fluting-rollers particularly constructed and shaped with reference to the formation of, and for the purpose of, producing, in connection with the said guide, a fluted trimming having a central portion with a crinkled or puffed appearance?

(Same objection.)

493 A. There were.

Q. 91. When the exhibits "Weitling Machine," "Weitling Spindle," and "Weitling Bar" were used in construction, were or not the fluting-rollers particularly constructed and shaped with reference to the formation of and for the purpose of producing in connection with the said Weitling bar fluted trimming having a central portion with a crinkled or puffed appearance?

(Same objection.)

A. They were.

Q. 92. With the guide like "Exhibits, Müller, 1, 2, and 5," when used in connection with a fluting-machine as described by Müller, does or does not the upper plate of the said guide serve the purpose to hold the material passed through between the two plates of the said guide in contact with the curved surface of the said guide?

(Same objection.)

A. The upper plate of the said guide serves the purpose stated in the question by leaning upon the material as it passes over the curved surface of the knob or protuberance which intervenes between the said upper plate and the fluting-rollers.

Q. 93. With the said machine as used by Müller with the guide like "Exhibits, Müller, 1, 2, and 5," after the material had been passed through the guide and into and between the rollers, and the machine started, would or would not the machine continue to operate and perform its work so long as power was applied and material or fabric supplied without any continued attention or assistance of an operator being required.

(Same objection.)

494 A. It would, so far as the feeding and fluting of the fabric are concerned, but as I have no recollection that Müller describes the use of a stripper, I think that the machine would not deliver the fabric without the assistance of an attendant unless some stripping-instrument was added to the machine for that purpose.

Q. 94. In the Robjohn machine as described in the Ex. Rabjohn patent, with the guide represented in figures 7 and 8, are these not a pair of fluting-rollers constructed with two rings of fluted teeth separated by an open space?

(Same objection.)

A. These are a pair of fluting-rollers constructed as recited in the question.

Q. 95. In the said Robjohn machine are there or not devices operating as pressers and operating in connection with annular zones or rings on the fluting-rollers?

(Same objection.)

A. There are such devices, namely, the pressers, designated in the "Exhibit, Robjohn Patent" as the two pressers *d d*.

Q. 96. In the said Robjohn machine is there not a guide with a surface arched or curved transversely placed centrally opposite the open space of the fluting-rollers between the fluted teeth?

(Same objection.)

A. There is a guide having its surface curved transversely and placed centrally, as stated in the question, such guide being the one designated by the letter C in figures 2, 7, 8, 9, 10, and 11.

495 Q. 97. In the operation of the said Robjohn machine does not the materials before passing to the fluting-rollers pass between two metallic surfaces or fixtures which serve to keep the fabric in position relatively to the fluting-rollers?

(Same objection.)

A. It does.

Q. 98. With the said Rabjohn machine, does or not the upper plate of the guide serve the purpose to hold the material in contact with the curved surface of the lower plate of the said guide?

(Same objection.)

A. It does.

Q. 99. With the said Robjohn machine, after the material has been passed through the guide and into and between the rollers and the machine started, will it or not continue to operate and perform its work so long as power is applied and material *on* fabric supplied without any continued attention or assistance of an operator being applied?

(Same objection.)

A. It would; for inasmuch as the Rabjohn machine as described in the patent has not only a guide, a pair of fluting-rollers, and a presser, but has in addition strippers designated in the drawing by the letters *e e*, the Robjohn machine, when put in operation by power upon a strip of material, would perform all the operations of grinding, fluting, pressing, and delivering the fluted fabric without any continued attendance upon the part of an operator.

Q. So far as you know, was the implement used in the Werner
496 machine for operating on the fabric in advance of the fluting-rollers known at the date of the original patent of King?

(Objected to as before, but it is understood that this question shall be considered as if asked on the witness being recalled for examination-in-chief.)

A. So far as I know, the implement used in the Werner machine for operating on the fabric in advance of the fluting-rollers, which said implement consists substantially of a flat plate (upon which the material lies) and of a narrow strong spring arranged above the said plate, (so as to bear upon the upper surface of the material and detain the narrow portion upon which it presses,) was not known at the original patent of King.

Q. 101. As far as you know, was the said Werner implement ever known as an equivalent or a substitute for the King guide described in re-issue No. 3000?

(Same objection and understanding.)

A. So far as I know, it was not known either as an equivalent or a substitute for the King guide.

Adjourned to 24th inst. at 11 a. m.

TUESDAY, *February 24th*, 1874.

Present, counsel as before.

Cross-examination of E. S. Renwick.

X. 102. Did you or did you not understand by the language of question 83 that that question refer'ed fully to the Weitling machin
497 as it now is with the rings on the fluting-rollers placed as the now appear, and the exhibit termed the "Weitling Spindle?"

A. I understood that it did.

X. 103. Do you know if the "Exhibit Weitling Spindles" were ever used with the rings on the fluting-rollers placed as described in question 83?

A. I have not seen the Weitling machine used, and have no personal knowledge on the subject.

X. 104. Describe what you understand to be the Müller machine referred to in questions 86, 87, 88, 90, 92, and 93, and the answers thereto.

A. I understand that the Müller machine referred to is a fluting or crimping machine, containing, in combination, a pair of fluting-rollers and a guide for operating upon the material or fabric before it passes to the fluting-rollers. The fluting-rollers, as I understood, were generally similar to those of Robjohn machine, but difficult from the latter in the respect that those of the Müller machine hold upon them the two rings "Exhibits, Müller No. 3 and 4," each which rings had at each side of them rings or rows of fluting-teeth. I do not recollect that Mr Müller testified that the machine had a stripper or strippers, and I gave my testimony in the answer referred to in the question under the assumption that it did not have a stripper or strippers. The guide of the Müller machine, which operated upon the fabric before it proceeded to the rollers, for the purpose of directing it thereto, and also of passing it to curve transversely, I understood to be the same as is represented by "Exhibit, Müller, 1, 2, and 5."

X. 105. In the Müller machine referred to in the last question and answer, are there rollers with fluting-rings and open spaces arranged in like manner in the same order as in "Exhibit, Re-issue 3000?"

498 A. In the Müller machine there are rollers with fluting rings and with two very narrow open spaces, but the rings and spaces are not arranged in the same relative order as those of the "Exhibit, Re-issue 3000." I may also state that the Müller machine has two rings, namely, "Exhibits, Müller, 3 and 4," which are not found in "Exhibit, Re-issue 3000."

X. 106. What is the exact shape of the central portion of the trimming produced by the passage of a strip of fabric through the Müller machine arranged with guides, like "Exhibits, Müller, 1, 2, and 5," as you have before described? Is such central portion not embraced in the shape shown by the "Exhibits, Müller, 3 and 4?"

A. I have never seen a piece of the fabric, but, from the construction of the machine described by Müller, taken in connection with "Exhibits, Müller, 1, 2, 3, 4, and 5," I should say that the central raised portion

of the fabric would be crinkled regularly in the form which was imparted to it by the operation of the two rings Exhibits 3 and 4; the form on the upper side resembling the rim of "Exhibit, Müller, No. 3," assuming that the pattern thereon were developed in straight line.

X. 107. Did you ever see the Müller machine in operation?

A. I never did.

X. 108. Did you ever see the "Exhibit, Weitling Rings, Weitling Spindles, and Weitling Bar," used in connection with each other?

A. If I recollect rightly, I used them myself in connection with each other some time ago, but within the last eighteen months on some short pieces of fabrics for experiment; but I never saw the machine heated up and in use for making fabric for the market.

X. 109. Do you know of your own knowledge *of* what purpose the Weitling rings, the Weitling spindles, and the Weitling bar were constructed?

(Objected to.)

499 A. I do not know what purposes the inventor may have had in his mind. I infer a purpose from the construction of the machine which I can state if required.

X. 110. Would the Robjohn machine made as described in his patent, "Ex., Robjohn Patent," produce an article of trimming substantially like that produced by Camptts' machine, described in re-issue 3000, and as that described in "Exhibit, Re-issue 3001?"

(Objected to as improper at this stage of the examination.)

A. The said Robjohn machine would produce an article of trimming which is substantially the same in some respects as the trimming produced in "Exhibit, Re-issue 3000," and described in "Ex., Re-issue 3001," but which would differ from that made by the said machine described in "Exhibit, Re-issue 3000" and from the article described in "Ex., Re-issue 3001," in several particulars; among which is the form of the central portion, which, when made by the machine described in "Ex., Re-issue No. 3000," or as described in "Ex., Re-issue No. 3001," would be crinkled and puffed up, but which when made by the machine described in the Robjohn patent with the guide C would be crinkled and flattened, or in other words plaited.

X. 111. Does not the implement used in the Werner machine placed in advance of the fluting-rollers for operating on the fabric, referred to in questions 100 and 101, perform the same office as the implement used in Camptts' machine described in "Ex., Re-issue 3000," for operating on the fabric, in advance of the fluting-rollers?

A. If by the words "same office" you mean generally that both instruments operate upon the material in advance of the fluting-rollers, as any other guide would do when placed in advance of the fluting-rollers, then I should say to that extent the implement used in the

500 Werner machine performs the same office as the implement used in the Camptts' machine described in re-issue 3000. But if the words "same office" have reference to the work done upon the fabric by the two implements, then the said implement used in the Werner machine does not perform the same office as the said implement used in the complainant's machine.

E. L. RENWICK.

Subscribed and sworn to before me this 24th day of February, 1874.

R. E. STIWELL,
Examiner, etc.

FEB'Y 27, 1874.

Present, counsel as before.

Def'ts' counsel closes the testimony on part of defendants, except as to the right to examine M'r Dorsey, as to matters brought out in the testimony affecting him, and as to samples of puffing, in reference to which his name has been introduced, and as to the following documentary evidence, Werner's caveat, mentioned in answer to X-question 113 of his testimony, and also the file-wrapper of Werner's patent, No. 134621, for improvement in crimping and fluting machines.

All which oral testimony is to be closed by Monday, M'ch 2nd, 1874, at 12 m., and the documentary evidence to be put in as soon as received from the Patent Office.

501 "*Exhibit Werner file-wrapper. No.* 134621.—*R. E. S., Ex.*"

THE U. S. PATENT OFFICE.

To all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the files of this office of the file-wrapper, in the matter of the letters-patent granted Robert Werner, dated January 7th, 1873, No. 134621, for imp't in crimp' and fluting machines.

In testimony whereof I, M. D. Leggett, Commissioner of Patents, have caused the seal of the Patent-Office to be hereunto affixed, this sixth day of March, in the year of our Lord one thousand eight hundred and seventy-four, and of the Independence of the United States the ninety-eighth.

M. D. LEGGETT, *Commissioner.*

1872. No. 1026.

No. 134621. 71.

Robert Werner, of Hoboken, county of Hudson, State of New Jersey. Combined crimping and fluting machine.

Received November 9th, 1872.
Petition, " " "
Affidavit, " " "
Specifications, " " "
| Drawing, " 11th, "
Model, " " "
Cert. dep.
502 | Cash $15, November 7th, 1872.
Add'l fee. Cert.
| " " Cash $20, January 4th, 1873.
Examined December 28th, 1872. T. R. Peale.
2 Issue, December 28th, 1872. Knight.
4 Patented, January 7th, 1873.
Recorded vol. Page .
Circular, December 30th, 1872.

MUNN & CO., *Present.*

503 SATURDAY, *April 18th*, 1874.

Present, counsel as before.

ORLANDO DORSEY, called and sworn as a witness on part of the defendant, deposes and says as follows:

Some time in October or November, 1872, I requested Robert Werner

to run some material through the machine patented in letters-patent 3000, or a machine corresponding thereto, without the guide being attached.

I instructed him at the same time to prepare the material as is usual when the article of puffing patented in letters-patent 3001 was made on the machine; this I did for the purpose of testing whether a guide was necessary in making that kind of puffing when made on the complainant's machine.

I stood by and saw several strips of muslin, or similar material, run through the machine at that time, and saw that the guide was not used. The strips were from one to two yards in length.

For the purpose of identifying those strips Mr Werner and myself marked them at the time.

The pieces were taken possession of by me at the time, and retained by me until they were introduced as exhibits in these cases, and were marked "Defendants' Exhibits J, K, L, and M."

The exhibits are the marked ends of several strips.

I considered them too bulky to be introduced in their full length, and only cut off each as much as would show the shape and character of the puffing; having no use for the residue I did not preserve them and can't now find them, but if desired will furnish any
504 reasonable number of yards made on the same kind of a machine, and in the same way.

Cross-examined by counsel for complainant:

X. 1. Are you solicitor and counsel for defendant in these suits?

A. I am.

X. 2. Was the exhibit marked "Exhibit L" trimmed on the edges after it came from the fluting-machine, or is it now in the precise condition it was when it left the fluting-machine?

A. I do not remember what the condition of the edges were; my purpose was only to get the configuration of an article of puffing made upon a pair of puffing-rollers so well constructed as to produce an article of puffing as the machine spoken of, without any other adjunct or device in combination with it.

X. 3. Did you observe the manner in which Mr Werner guided the strip of material with his hands to the fluting-rollers when he made the pieces spoken of in your direct examination?

A. I saw Mr Werner introduce one end of the material between the fluting-rollers with his hands and start the rollers, which proceeded to draw the material through the rollers. Mr Werner stood in front of the machine holding one end of the material with his hand, and the material was drawn through his hands as it passed through the rollers; that is all I recollect as to his guiding the material.

ORLANDO DORSEY.

Subscribed and sworn to before me this 18th day of April, 1874.

R. E. STILLWELL,
Examiner, &c.

505 Defendants' counsel offers in evidence certified copy of caveat filed Oct. 30th, 1871, and the same is marked "Werner Caveat, April 18th, 1874, R. E. S., Ex."

Also certified copy of the file-wrapper in the matter of the letters-patent granted Robert Werner, and the same is marked "Exhibit, Werner File-Wrapper, April 18th, 1874, R. E. S., Ex."

[Here follows diagram marked page 506.]

507 *"Exhibit Weitling Application. Nov. 13th, R. E. S., Exam'r."*

The United States Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the files of this office of the file-wrapper and contents and drawing in the matter of the application of W'm Weitling, filed March 8th, 1855, for crimping-machine.

In testimony whereof, I, J. M. Thacher, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this eighteenth day of September, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States the ninety-seventh.

[L. S.] J. M. THACHER,
Acting Commissioner.

Petition to the Commissioner of Patents.

The petition of William Weitling, of New York, in the county of New York and State of New York, respectfully represents:

That your petitioner has invented a new and improved machine
508 for crimping or forming folds in cloth, paper, etc., for ornamental purposes, which he verily believes has not been known or used prior to the invention thereof by your petitioner. He therefore prays that letters-patent of the United States may be granted to him therefor, vesting in him, and his legal representatives, the exclusive right to the same, upon the terms and conditions expressed in the act of Congress in that case made and provided, he having paid thirty dollars into the Treasury, and otherwise complied with the requirements of said act; and he hereby authorizes O. D. Munn and S. H. Wales, of the firm Munn & Co., or their accredited agents, to act as his attorneys in presenting the application and in making all such alterations and amendments as may be required.

W'M WEITLING.

CITY AND COUNTY OF NEW YORK,
State of New York, ss:

On this 6th day of March, 1855, before the subscriber, a commissioner of deeds in and for said county, personally appeared the within-named William Weitling, and made solemn oath that he verily believes himself to be the original and first inventor of the within-described improved machine for crimping or forming folds in cloth, paper, etc., for ornamental purposes, and that he does not know or believe that the same was ever before known or used; and that he is a citizen of the United States.

L. PITKIN,
Commissioner of Deeds.

The schedule referred to in these letters-patent, and making part of the same.

To all whom it may concern:

Be it known that I, William Weitling, of the city, county, and
509 State of New York, have invented a new and improved machine for crimping or forming folds in cloth, paper, etc., for ornamental

purposes, and I do hereby declare that the following is a full, clear, and exact description of the same; reference being had to the annexed drawings, making apart of this specification, in which—

Figure 1 is a plan or top view of my improved machine.

Figure 2 is a longitudinal section of one of the rollers and the dies thereon.

Similar letters of reference indicate corresponding parts in the two figures.

The nature of my invention consists in placing a series of annular dies upon two shafts or rollers, one roller being placed over the other and one set of dies bearing into the other; the annular dies are creased or grooved, and are placed loosely on the rollers, and secured by a nut or otherwise, so that the dies may be changed or varied to produce a variety of patterns or figures.

To enable others skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a suitable frame-work, in the upper part of which two metallic shafts or rollers, B B, work, said shafts or rollers being fitted in suitable bearings.

On one end of the shafts or rollers are placed rings or bands, *a;* these rings or bands are placed loosely on the shafts or rollers, but are secured thereon by nuts, *c c*, one at the end of each shaft; the nuts, by being turned, press the rings or bands against shoulders *b* and secure them firmly on the shafts or rollers. The peripheries of the rings or bands are grooved in straight, curved, or zigzag manner, as shown in Fig. 1, and the rings or bands on one shaft gear into the rings or bands on the other shaft.

510 A crank, D, is attached to the end of one of the shafts or rollers, and if paper is to be crimped or folded, it is slightly moistened and placed between the rings or bands, *a;* the crank D s then turned and the paper is forced between the rollers and crimped or folded; the folds corresponding in form to the grooves cut in the peripheries of the rings or bands *a*, which are in fact dies; the pattern or form may be diversified by changing the rings or bands *a;* for instance, if half of the rings or bands on each shaft or roller are removed and replaced by different ones, the form of the folds will be materially changed. The rings or bands may be easily detached from the rollers or shafts by unscrewing the *the* nuts *c c*. Any number of rings or bands may be used.

If cloth is to be crimped, the shafts or rollers and rings or bands are heated, by placing heaters within the shafts or rollers, they being made hollow, as shown in Figure 2.

I am aware that groove-rollers have been previously used for crimping, but the grooves have been cut in the peripheries of the rollers, and consequently the pattern could not be changed or diversified. I do not claim, therefore, grooved or corrugated rollers simply; but what I do claim as new and desire to secure by letters-patent, is—

The annular bands or dies *a*, grooved or corrugated on their peripheries, and placed loosely on the shafts or rollers B B, and secured on the shafts or rollers by means of the nuts C C, which by being screwed up press the bands or dies against the shoulders *b*, by which the bands or dies may be changed, and consequently the patterns changed or diversified, as herein set forth.

WM WEITLING.

Witnesses:
JAS GEO. MASON,
WILLIAM TUSCH.

(Endorsed:) W'm Weitling. Rec'd and filed March 8th, 1855. S. T. Shugert.

511 U. S. PATENT-OFFICE,
March 31st, 1855.

SIR: Upon examination of your application for letters-patent for alleged improvements in crimping-machines, it is not found to present any patentable novelty.

The device which forms the basis of your alleged improvement is of very common use in a variety of analogous machines; for instance, in printing patterns of a number of colors, a number of color-rolls, chosen and arranged according to the desired result, are strung, so to speak, upon a common axis and screwed by a nut or other means fast together. An instance of this is found in Peter Force's apparatus for printing paper-hangings, &c., patented August 22d, 1822. Moreover, in Bergeron's "Manuel *on* Tourneur," plate 26th, is figured an instrument not, it is believed, in uncommon use, where the die is formed upon the periphery of a roller screwed upon an axle *for* which it can be detached and a roller-die of different pattern substituted. In view of this device, your own involves merely a multiplication of parts. You are referred also to P. P. Read's machine for making ox shoes, patented January 23d, 1849, and to James Montgomery's machine for rolling iron beams, rejected October 23d, 1854.

Respectfully, yours,

WILLIAM WEITLING,
Care of Munn & Co., New York.

W. C. L.

(Endorsed:) Brief of letter, March 31st, 1855. William Weitling crimping-mach.

To the Commissioner of Patents:

512 SIR: I hereby withdraw my application for a patent for improvements in crimping, now in your office, and request that twenty dollars may be returned to me, by mail, agreeably to the provision of the act of Congress authorizing such withdrawal.

WILLIAM WEITLING,
Letter-Box No. 2857, New York City Post-Office, State N. Y.

(Endorsed:) Withdrawal. Filed April 16, 1855. H. M. C.

In declaring an interference between this application and existing patents, under Rule 41, preliminary statements from the parties need not be called for.

SAMUEL A. DUNCAN,
Att'y *Commissioner.*

OCTOBER 3d, 1871.

(Endorsed:) Commissioner's decision, *care* of William Weitling, filed January 7, 1871.

To the Commissioner of Patents:

The decision of the Commissioner is, without any doubt, the result of a misunderstanding; the application was forwarded by Munn & Co.

The word "died" "die" may have been the "principal" cause of this misunderstanding. In my machine nothing is to be died; every annular must be *sawed;* it is for pressing folds with it, not for printing colors.

But that may be, I am sure in Paris I will be understood, and will be patented there.

513 I am the more puzzled as for a joke like the engraving enclosed a patent was applied for and obtained.

Please oblige your petitioner and send me, with the money to be refunded, a formular of application, because I have many other inventions in store now, such as this school-room.

W. WEITLING.

No. . William Weitling, of New York, county of New York, State of New York. Crimping-machine.

Rec'd, March 8, 1855.
Petition, " " "
Affidavit, " " "
Specification, " " "
2 Drawings, " " "
3 Model, " 22, "
1 Cert. dep. $30, " 8, "
Cash .
Examined, cash by mail, to applicant,
2 Issue, April 16, 1855.
Patented, 185 .
3 Recorded, vol. , page .

MUNN & CO.,
New York.

C. Rejected, March 31st, 1855.

His application was renewed, January 7, 1871, by filing a new one.
Ex'd. K. K.

514 *Exhibit Weitling File-Wrapper, Nov. 13th, 1872.—R. E. S., Exam'r."*

THE UNITED STATES PATENT-OFFICE.

To all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the files and records of this office of the file-wrapper, contents, and drawing in the matter of the letters-patent granted Caroline Weitling, admin'x, and W'm C. McIntire, dated August 27th, 1872, No. 130962, for improvement in fluting-machines.

In testimony whereof I, J. M. Thacher, Acting Commissioner of Patents, have caused the seal of the Patent-Office to be hereunto affixed, this eighteenth day of September, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States the ninety-seventh.

[L. S.]

J. M. THACHER,
Acting Commissioner.

WASHINGTON, D. C.,
January 7th, 1870.

HON. COMMISSIONER PATENTS:

SIR: In the matter of the rejected and withdrawn application of

William Weitling, (filed March, 1855,) for letters-patent for improved crimping-machine, we beg leave to file a new application in re-
515 newal of the same, in accordance with the act of Congress relating to patents, approved July 8th, 1870, and herewith transmit new drawing and specification, with the request that action may be taken, and the application examined without model, in the event that the original cannot be found, the drawing and specification fully illustrating the invention.

Very respectfully,

A. L. McINTIRE & CO.,
Attorneys for Wm Weitling.

No model necessary.

H. P. MUNSON, *Ex.*

(Endorsed:) W. Weitling. No. 1½. Renewal. Patent-Office, Jan. 7, 1871. U. S. A.

Petition.

To the Commissioner of Patents:

The petition of William Weitling, of New York, in the county of New York and State of New York, respectfully represents that your petitioner has invented certain new and useful improvements in rolls for fluting-machines, which he verily believes has not been known or used prior to the invention thereof by your petitioner. He therefore prays that letters-patent of the United States may be granted to him therefor, vesting in him and his legal representatives the exclusive right to the same, upon the terms and conditions expressed in the act of Con-
516 gress, in that case made and provided, he having paid fifteen dollars into the Treasury and complied with the other provisions of said act.

He further authorizes A. L. McIntire & Co. to act as his attorneys in the premises, as they may deem expedient, and to receive letters-patent.

WILLIAM WEITLING.

Specification.

To all whom it may concern:

Be is known that I, William Weitling, of New York, in the county of New York and the State of New York, have invented certain new and useful improvements in rolls for fluting-machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this application.

(Erase and insert amendment A, filed July 26th, 1871.)

My invention has for its object to produce rolls for fluting-machines, capable of being made to vary the pattern of the work performed by them, and consists in forming an ordinary hollow roll somewhat smaller than those generally in use, having a smooth exterior and provided near the frame or bearing with a suitable annular shoulder, against which rings having designs or fluting rest, and having at its outer end a male-screw thread, adapted to receive a binding-nut for securing the rings in place, as will be presently more fully explained. To enable those skilled in the art to understand my invention, I will proceed to describe the con-

struction and operation of the same, referring by letters to the accompanying drawing, in which—

517 Figure 1 is a side elevation of a pair of rolls embracing my invention, mounted in a frame, (the lower roll being shown in section,) and

Figures 2, 3, and 4 are modifications in the mode of securing the rings. Similar letters of reference indicate like parts in the different figures.

A is intended to represent a suitable frame, in which are mounted two smooth hollow rolls B B, provided near their bearing in the frame with an annular shoulder *c*, against which rests one of a series of rings D D and C.

These rings are of suitable thickness. To enable them to be readily heated by contact with the hollow roll, and at the same time retain the heat thus acquired, their faces or peripheries are fluted or corrugated in various designs, and adapted to mash with corresponding rings on the companion roll. The outer ends of the hollow rolls B B are threaded and adapted to receive a binding-nut E, which crowds the rings D between it and the shoulder *c*, thus preventing them from rotating on the rolls. When the pattern to be produced is of such a nature as to require a little material for take-up between the rings a thin washer is introduced between said rings, whilst a straight or other design, not requiring any extra material, may be produced more perfectly by the withdrawal of said washers. Where a small number of rings are employed, washers 1, 2, 3, and *c* are used. To more perfectly secure the rings against rotation upon their respective rolls, the means shown in the modifications represented in Figures 2, 3, and 4 may be employed, which consists in providing the roll with a feather, *a*, and the rings with one or more grooves, *b*, as seen at fig. 3, or the reverse, as shown at fig. 4, or by providing the shoulder with one or more tits, and the rings, with similar tits on one side and corresponding holes on the other side, but I prefer to apply and use the rings as shown in fig. 1; as the rings upon the upper roll mash into those on the lower roll, there

518 is little or no liability for them to become displaced. It will thus be seen that the design impressed by the rings may be varied at pleasure, from straight fluting to serpentine, zigzag, or other pattern, by simply changing the rings or their relative positions. Of course the rings may be made of any width "tread" deemed most expedient, and any number, assorted or otherwise, may accompany a machine. The hollow rolls are heated and rotated in the usual manner, and are so arranged as to present an open, unobstructed passage for the work, which is a great desideratum, especially where the pattern is of considerable extent and requiring plenty of room.

Having described the advantages, construction, and operation, what I claim as new, and desire to secure by letters-patent, is: A fluting roll or rolls composed of a hollow shaft, provided with one or more fluted rings, adapted to be arranged and secured upon said shaft, substantially in the manner and for the purpose set forth.

I also claim so arranging the rolls with reference to the frame of the machine as to leave an open or unobstructed passage for the material passing between the rolls, substantially as and for the purpose set forth.

Witness my hand and seal this day 187 .

WILLIAM WEITLING.

In presence of—

WILLIAM VETTER,

PHILIP MALER.

Oath.

CITY OF NEW YORK, COUNTY OF NEW YORK,
State of New York, ss:

On this 30th day of December, 1870, before me, the subscriber, a notary public for said county and State, personally appeared William Weitling, and made solemn oath that he verily believes himself to be the original and first inventor of the herein-described improve-
519 ments in rolls for fluting-machines, and that he does not know or believe the same was ever before known or used; and that he is a citizen of the United States.

WILLIAM WEITLING.

Sworn to before me this 30th day of December, 1870.
[L. S.] JOSEPH A. NESSELER,
Notary Public.

(Endorsed:) Patent Office, January 7, 1871, U. S. A. Cancelled, except petition, oath and signatures, by "substitute specification." Filed July 26,'1871.

WASHINGTON, D. C., *June* 1871.

Hon. COMMISSIONER OF PATENTS:

SIR: I have the honor to acknowledge the receipt of the official letter in the matter of my renewed application for letters patent for improvement in fluting-machines, and, in accordance with the suggestion therein, I beg leave to substitute the accompanying drawing for the one filed Jan'y 7th, 1871, and to amend the specification by erasing from the beginning thereof to the signature, and substituting therefor the following:

[(A) Erase, and insert amendment D, filed September 27, 1871.]

My invention has for its object the production of a roll or rolls for fluting-machines, capable of being made to vary the pattern or design of their impress. My invention has for a further object to provide a variable spring-bearing for the upper roll, in order that it may
520 adapt itself to thick or thin material passing between it and the lower roll, and my invention has for a further object so constructing the bearing for the roller-shafts that they may be readily removed, or kept in position, and to these ends my invention consists—

Firstly. In a hollow roll adapted to receive one or a series of sleeves, having varied corrugated faces, and secured in position as will be presently set forth;

Secondly. In providing the upper roll with a spring-bearing in order that a thick or thin material may pass between the rolls; and

Thirdly. In arranging the bearings for the rolls within the frames in sections as shown, having a depression in their upper faces, into which a projection of the securing plate or rod rests, thus securely locking all in position, as will presently be more fully explained.

To enable those skilled to make and use my improved fluting-machine I will describe the same, referring to the accompanying drawing, in which—

Figure 1 is a top view, with the right-hand securing plate or bar removed;

Figure 2 is a vertical section at the line *x x* of figure 1;

Figure 3 is a transverse detail section, showing the manner of securing the bearings or boxes in place; and

Figure 4 is a detail view, showing a means of securing the sleeves (where a series are used) in the proper relation to each other.

Similar letters of reference denote like parts in the several views.

A is the frame, which of course is cast or otherwise made of
521 iron, adapted to receive the bearings (in sections) B, B, and also the spring-plates C, C, which are provided with interposed springs, D, secured about as shown. The plate C, resting against the bearings as a matter of necessity, has a space within which to move. The bearings B are dropped in the frame as seen, one above and below each other, and they have a depression formed in the face thereof, as seen at *a*, fig's 1 and 3, more particularly. A securing plate or rod E, having a projection corresponding to such depression, is then secured to the top of the frame by means of screws F, thus securely holding the bearings B against lateral movement.

The rolls are composed of an ordinary hollow cylinder G, with the proper shoulders to prevent lateral movement, and provided with a crank-handle, H, to one, removable and attachable by means of a screw, *b*. The operating or fluting ends of the rollers which project beyond the frame are adapted to receive one or more sleeves J, the faces or peripheries of which are provided with the design they are intended to impart. If one sleeve is used, the object is to produce a continuous pattern; for instance, the single sleeve may have the whole design thereon; it may be a varied or continuous one, and a fine fluted sleeve may be substituted by a coarser one, and the reverse. Where a series of sleeves or rings are used the object will be to produce a varied pattern, that is, one composed of a combination of designs, being zigzag, serpentine, &c., or part zigzag and serpentine and part straight fluting; in fact, any number of designs may be produced by changing the sleeves or rings upon the hollow cylinders, which are secured thereto by any suitable means. I have shown as one way only a nut, I, at the extremity of the cylinders, clamping the rings between it and a shoulder near the bearings of said cylinders. Of course washers would be necessary where a small number of rings are used. These rings are provided within their interior circumference with a feather groove, *e*, so that by one straight feather they may all be kept
in the relatively proper position. See particularly figure 4.

522 One special advantage, the result of the use of sleeves, is the rapid transmission of heat hereto from the hot irons within the cylinders. It will be observed that the width of the rings may be varied and any number of rings and patterns may accompany a machine.

Having described the construction, &c., of my improved fluting-machine, what I claim as new, and desire to secure by letters-patent, is:

The rolls of a fluting machine adapted to receive and in combination with one or more sleeves, J, substantially as and for the purposes hereinbefore set forth.

(Erase, per Amend't "C," Sept. 25, 1871.)

Second. A variable or spring bearing for one or both rollers, enabling them to adapt themselves to thick or thin material passing between, as herein shown and described.

Third. The bearings or boxes B, held or secured in place substantially in the manner herein shown and described.

Fourth. The fluting-sleeves of a fluting-machine, provided with a groove or feather slot in their interior circumference, in combination with a strip or feather, for the purpose of keeping them in proper position relative to each other, as hereinbefore set forth.

WM WEITLING,
By Att'ys, A. L. McINTIRE & CO.

(Endorsed:) Weitling to office, July 26, 1871. Patent-Office, July 26, 1871, U. S. A. Substitute specification, cancelled Sept. 27, 1871.

523 WASHINGTON CITY, D. C.,
July 25th, 1871.

HON. COMMISSIONER OF PATENTS:

SIR: I have the honor to acknowledge the receipt of the official communication of January 31st, rejecting my application for letters-patent (renewed) for "fluting-machine."

I have made a new drawing, accompanying this, which I beg may be substituted for the one filed January 7th, and as an answer to the first objection made in the office letter; an amended specification is also transmitted herewith, and I most respectfully request a reconsideration of the case.

The most important question raised by the office is that of abandonment, and it is my desire that this question should be first disposed of, when I will then so alter or amend the specification as may be necessary.

I have the honor to submit herewith two depositions, one of Caroline Weitling, and the other of Phil. Koch, tending to show conclusively that I never intended to abandon my rights, and that any and all seeming delay was the result of poverty. The record in my original application will show that while, through ignorance of my rights, I submitted to the dictates of the office, I did not admit any want of novelty in my invention, or intend, by withdrawing my application, to proclaim an abandonment; my conception of the law being that protection was guaranteed to an inventor as against any and all subsequent applicants, if the invention should prove novel. I respectfully refer to my letter on file with the original application. I submit that I have committed no act which can be construed as abandonment under the law, and that no proclamation of any such intention has ever by me been made. My failure to prosecute my application has always been, primarily, for the want of means; and, secondarily, by ignorantly supposing that it would be impossible to have the office reverse what I pre-
524 sumed was a solemn and final action. The law of July 8th, 1870, came to my rescue, and lifted me from the sluice of ignorance in which I was mired, and pecuniary means, from the hands of those interested with me, has enabled me to overcome the difficulties induced by my poverty.

It will be observed by reference to the decision of Ch. J. D. K. Cartter, recorded in vol. page , Book of Appeals, in the case of Ja's R. McClintoch, on behalf of himself and Jno. Cumberland, deceased, application for letters-patent for improvement in cotton-bale tie, (and this is the only one of many decisions which I desire to refer to,) that the court held, "that abandonment is the voluntary act of the party; the proof of it should be distinguished by some act, fact, or declaration that the party intends it. * * *" I deny that any "act" has been performed, any "fact" made patent, or any "declaration" made implying any intention whatever of abandoning any rights I might have, but, as the court says, "affirmative proof to the contrary." I am perfectly willing to rest my case upon the good law and sound principles of equity expounded in the decision above referred to, feeling satisfied that, applying aptly as it does, this decision will be taken as a precedent, and abandonment adjudged not to exist.

Respectfully,

WM WEITLING.
By Att'ys, A. L. McINTIRE & CO.

(Endorsed:) Weitling to office, July 26, 1871. "Argument." Patent-Office, July 28, 1871, U. S. A.

525 In the matter of the renewed application of William Weitling for letters-patent for improved fluting-machine. Filed January 7th, 1871.

Before the Commissioner of Patents.

STATE OF NEW YORK,
City and County of New York, ss:

PHILIP KOCH, being duly sworn according to law, deposeth and saith:

My name is Philip Koch. I reside at No. 753 Third avenue, in the city of New York. My business at present is that of tailor, formerly I was a wholesale dealer in clothing. I knew William Weitling, deceased. He died at the city of New York on the 26th day of January, 1871. I was acquainted with William Weitling since 1838; became first acquainted with him in Switzerland. I remember that he filed an application for a patent for a "crimping-machine," in the United States Patent-Office at Washington, about the year 1835. At that time he spoke to me about his application for a patent for a "crimping-machine," and asked me to loan him some money to pay the necessary expenses in obtaining the patent, as he said he had difficulties in getting the patent because he had no money. I know he was very poor at that time, and continued so up to the time of his death. I did not lend him the money, because I had none. I know that he was a sober, industrious, honest, hard-working man. When he died his family did not have enough money to pay the funeral expenses. His friends appointed a committee, of which I was a member, and a subscription was raised to pay the funeral expenses.

PH. KOCH.

Subsc'ibed and sworn to before me July 19th, 1871.
[SEAL.] GEO. FRANCES DEMAREST,
Notary Public, N. Y. C.

526 (Endorsed:) Weitling to office, July 26, 1871. "Affidavit."

In the matter of the renewed application of William Weitling for letters-patent for improved fluting-machine. Filed January 7th, 1871.

Before the Commissioner of Patents.

STATE OF NEW YORK,
City and County of New York, ss:

CAROLINE WEITLING, being duly sworn according to law, deposeth and saith:

My name is Caroline Weitling. I am the widow of William Weitling, deceased. He died at the city of New York on the 26th day of January, 1871. He left a family of six children, of the ages of two, five, seven, nine, thirteen, and fifteen years, respectively. He left his family in sorely straitened circumstances, without any means for their support. He has suffered greatly from poverty for the past fifteen years. He was a writer by occupation, and eked out a scanty living, a bare subsistence, by his literary labors, aided by the charity of a few friends who were compelled to furnish him pecuniary aid that he might be able

to maintain his family in the plainest possible manner. He was a sober, industrious, honest, hard-working man, whose constant labor was poorly requited. I remember that he filed an application for a patent for a crimping-machine, in the United States Patent-Office at Washington, about the year 1855, and I know that since that time it has required more than all the money he could save to support his family. I know that he never abandoned his hope that justice would be done him, and that he would sooner or later get a patent for his invention. I have often heard him lament his inability to pay lawyer's fees and other ex-
527 penses, that he might thus be enabled to succeed in securing his rights. I remember that when his application for this patent was rejected he could not then appreciate and totally denied the relevancy of the references cited by the Patent-Office, but from ignorance of his rights and a magnified idea of the powers of the examiner, augmented by his extreme poverty, he was induced to withdraw his application; but I know that never at that or any subsequent time did he intend to abandon his rights in this invention, or lose faith in his belief that the presence among the records of the Patent-Office of the specification, drawing, and model complete of his invention would protect him as against any subsequent inventor or user, if there was anything patentable in his invention. I remember that he has said that the papers on file of his original application contained evidence of the fact that he denied the relevancy of the references, and of his reluctance to withdraw the case.

My husband was a man of great reticence, and had but few if any confidants. I do not know that he ever said much to anybody besides myself respecting his claim to a patent for his crimping-machine. Some of those most likely to have heard him speak of it are deceased. There are those living who know of his great poverty.

CAROLINE WEITLING.

Subscribed and sworn to before me this 12th day of July, 1871.

[SEAL.] W. P. JAMES,
Notary Public, N. Y. C.

(Endorsed:) Weitling to office, July 26, 1871. "Affidavit." Patent, July 26, 1871, U. S. A.

528 U. S. PATENT-OFFICE,
Washington, D. C., August 10th, 1871.

WILLIAM WEITLING,
(Care of A. L. McIntire,)
Wash., D. C.:

Please find below a communication from the examiner relative to your application for a patent for "rolls for fluting-machines."

Filed March 8th, 1855.
Renewed Jan'y 7th, 1871.

Very respectfully,

Commissioner.

EXAMINER'S ROOM, No. 25.

The original application in this case was for an improved machine for crimping, &c. The case has been re-examined upon amendments and argument filed, and the question of abandonment will not be considered under the decision of the Commissioner, case of Gray vs. Hale, for 2d q'r 1872, p. 45.

The first clause of claim, as amended July 26th, 1871, is essentially

the same as the first clause filed at renewal, January 7th, 1871, and rejected January 31st, 1871, and it is again rejected on the references before given, viz: Pat's to H. G. Pearson, December 21st, 1869; A. J. Cross, January 10th, 1870; C. E. L. Holmes, March 1, 1870; M. P. Carpenter, June 28th, 1870; L. G. Cabell, September 27th, 1870; and applications of L. H. Mandlebaum, filed June 3d, 1864; T. Robjohn, filed April 1st, 1865; and H. Laurbrier, filed July 19th, 1870.

As to a variable spring pressure, the subject of second clause of claim, it is common in many machines, such as wringing, smut, fruit, and oil rotary presses, and others where foreign matter may necessitate yielding to avoid damage—English patent No. 2460 of 1854, before
529 given, for a different claim, since eliminated, is however a good example of this device, anticipating second clause of claim. See also rejected case of Emil Reuter, withdrawn May 19th, 1851, (wringing-machine,) also rejected case of R. W. Duyers, (improved mangle,) filed January 26th, 1856.

There is no invention in making the bearings of a roll or axle in two pieces or "sections."

Nothing is more common, is a fact known at least to every machinist, and the same may be said of the shape of these, to hold them in place, avoiding lateral displacement; a projection on one piece, to hold another, having a corresponding cavity, cannot be said to amount to invention; tongues and grooves, dove-tails, &c., &c., are applied to standards and boxes or bearings. See, among others, the following examples: Patents to A. Heaton, January 13th, 1847, (sheet-metal machines,) patent of W'm Clay, April 21st, 1851, (rolling iron,) Jacob Rees, (do.,) February 14th, 1854, patent of M. Seabury, (do.,) April 29th, 1839, Geo. Stoudinger, July 17th, 1830, and January 11th, 1831, (rolling dies,) and Horatio Young, October 9th, 1847, (rolling.)

It is a common thing to key wheels, pulleys, &c., to shafting or axles. The patent of S. G. Booth, (sheet-metal machines,) January 23d, 1855, filed April 24th, 1854, shows rolls of various shapes, made up of a series of plates secured by keys, (see specification or patent;) the patent of Peter Force, of August 22d, 1822, for printing-paper, and originally given applicant as a reference, shows a series of rolls tied together by bolts passing through them and tightened by nuts. The patent of Mark R. Pearson, October 24, 1854, (see spinning,) shows keying of two parts. The feather not being a part of the axle, or hollow roller not entering a slot in it, can make no patentable difference.

The several clauses of claim are rejected.

S. S. FAHNESTOCK,
1st Ass't Ex. in Ch'g.

(Endorsed:) Office to Weitling, August 10, 1871. Rejected.

530 WASHINGTON CITY, D. C., *Sept. 25th*, 1871.

Hon. COMMISSIONER OF PATENTS:

SIR: I have the honor to acknowledge the receipt of the official communication, again rejecting my application for letters-patent for crimping (or fluting) machine, and, without prejudice to future rights, hereby amend my application and ask for a declaration of interference, with the references cited to the first clause of claims. Amend the specification by erasing the "second, third, and fourth" statements of invention, and likewise the "second, third, and fourth" clauses of claim.

Respectfully,

W'M WEITLING,
By Att'ys, A. L. McINTIRE & CO.

(Endorsed:) Weitling to office, September 25, 1871. Amendment and request for interference, cancelled September 27, 1871. Patent-Office, September 25, 1871, U. S. A.

WASHINGTON, D. C., *Sept. 27th*, 1871.

HON. COMMISSIONER OF PATENTS:

SIR: I beg leave to submit herewith an amended specification in the matter of my application for letters-patent for "rolls for fluting-machines," which removes from the application all matter except such as seems to be conceded to be patentable in the absence of the several references given, and with which I ask that an interference be declared, (should the record proof be deemed insufficient,) in order that I may have an opportunity to prove priority of invention.

Very respectfully,

WM W. WEITLING,
By Att'ys, A. L. McINTIRE & CO.

531 (Endorsed:) Wm Weitling to office, September 27, 1871. Letter and request for interference. Patent-Office, September 27, 1871, U. S. A.

I hereby amend my application for letters-patent for "rolls for fluting-machines" by erasing the present specification as amended, and submitting therefor the following, to wit:

D.

My invention has for its object to produce a roll or rolls for fluting-machines capable of being made to vary the pattern or design of their impress, and consists in forming the roll or rolls of a hollow mandrel and one or more removable sleeves, as will be hereinafter more fully explained.

To enable those skilled in the art to make and use the same, I will proceed to describe the construction and operation, referring by letters to the accompanying drawing:

Figure 1 is a top view of a fluting-machine, embodying my improvement;

Figure 2 is a vertical section at the line * * of figure 1;

Figure 3 is a transverse detail section, showing a mode of securing the bearings or boxes in place; and

Figure 4 is another detail view, showing a means of securing the sleeves (where two or more are used) in proper relation to each other. Similar letters denote like parts in the several figures.

A represents the frame so constructed that bearings B B may be arranged therein, and springs or spring-plates C C, giving an opportunity for slight movement to the rolls, in order that they may
532 adapt themselves to varying thicknesses of material upon which they may be operating.

I have shown the bearings B B as made in sections, and arranged in one manner within the frame; this of course may be changed to suit circumstances.

As the main feature of my invention rests in the construction of the roll or rolls, I will describe them accurately, leaving the drawing alone to explain the other parts.

G are hollow mandrels, arranged to turn in proper bearings of a fluting-machine, and the projecting or fluting ends are adapted to receive

one or more fluting-sleeves, J. The object of making a single sleeve removable is in order that it may be changed and one substituted having the flutings or corrugations finer or coarser as may be desired. And where two or more are used they may be of the same or varied corrugations, parallel or at different angles and curves to the axis, and arranged upon the hollow heating-mandrel in such way as to produce any regular or varied design; for instance, part coarse and part fine, or all of a size, in straight, serpentine, or zigzag lines.

These sleeves may be secured in any desirable manner to the mandrel, though I have shown them secured by being clamped between an annular shoulder near the frame and a nut, I, at the extreme end of the mandrel; of course washers would be necessary between the last sleeve and the nut where a limited number are used, and in some instances it might be desirable to use them between each or any two of the sleeves, to break the continuity of the flutes.

I have shown as a means of securing the sleeves in proper relative position, one with another, a groove on the interior of the sleeve, adapted to receive a loose independent feather, so that the grooves being placed in line and the feather put therein, fixes the relation of the sleeves, without preventing them, however, as a combined family of sleeves, from being moved or adjusted upon their mandrel.

533 Having described my invention, what I claim as new and desire to secure by letters-patent is a roll or rolls for fluting-machines, composed of a hollow heating-mandrel and one or more removable corrugated sleeves, substantially as and for the purpose set forth.

Respectfully submitted.

WM WEITLING,
By att'ys, A. L. McINTYRE & CO.

(Endorsed:) W'm Weitling to office, September 27, 1871. Amendment. Patent-Office, Sept. 27, 1871, U. S. A.

NEW YORK CITY, *May* 27, 1872.

Hon. COMMISSIONER OF PATENTS:

SIR: You will please recognize W'm C. McIntyre, of Washington City, as my true and lawful attorney in the matter of the application of William Weitling, (deceased,) for letters-patent for crimping-machines or rolls for fluting-machines; and I hereby acknowledge and confirm all acts of said W'm C. McIntyre and A. L. McIntrye & Co. in the premises since the decease of the applicant, and I also recognize all acts on the part of the U. S. Patent-Office to the present time.

CAROLINE WEITLING,
Admin'x of William Weitling, deceased.

Witness:
DAVID N. ROSSEY.

[U. S. i. r. stamp.]

(Endorsed:) Patent-Office, May 27, 1872, U. S. A.

534 The people of the State of New York to Caroline Weitling, of the city of New York, widow of William Weitling, send greeting:

Whereas said William Weitling lately departed this life intestate, being at or immediately previous to his death an inhabitant of the county of New York, by means whereof the ordering and granting ad-

ministration of all and singular the goods, chattels, and credits whereof the said intestate died possessed in the State of New York, and also the auditing, allowing, and final discharging the account thereof, doth appertain unto us: And we being desirous that the goods, chattels, and the credits of the said intestate may be well and faithfully administered, applied, and disposed of, do grant unto you, the said Caroline Weitling, full power by these presents to administer and faithfully dispose of all and singular the said goods, chattels, and credits; to ask, demand, recover, and receive the debts which unto the said intestate whilst living and at the time of his death did belong; and to pay the debts which the said intestate did owe, as far as such goods, chattels, and credits will thereunto extend and the law require; hereby requiring you to make, or cause to be made, a true and perfect inventory of all and singular the goods, chattels, and credits of the said intestate within a reasonable time, and return a duplicate thereof to our surrogate of the county of New York within three months from the date of these presents; and if further personal property or assets of any kind, not mentioned in any inventory that shall have been so made, shall come to your possession or knowledge, to make or cause to be made in like manner a true and perfect inventory thereof, and return the same within two months after the discovery thereof, and also to render a just and true account of administration when thereunto required. And we do by these presents depute, constitute, and appoint you, the said
535 Caroline Weitling, administratrix of all and singular the goods, chattels, and credits of the said William Weitling, deceased.

In testimony whereof we have caused the seal of office of surrogate of said county to be hereunto affixed.

Witness Robert C. Hutchings, surrogate of said county, at the city of New York, the seventh day of February, in the year of our Lord one thousand eight hundred and seventy-one.

[L. S.] ROBERT C. HUTCHINGS,
Surrogate.

Copy.

(Endorsed:) Certified copy letters of administration granted to Caroline Weitling upon the goods, chattels, and credits of William Weitling, deceased. Patent-Office, May 27, 1872, U. S. A.

STATE AND COUNTY OF NEW YORK,
Surrogate's Office, ss:

I, Morgan A. Dayton, j'r, clerk to the surrogate's court of said county, do hereby certify that I have compared the foregoing copy of the letters of administration granted to Caroline Weitling upon the goods, chattels, and credits of William Weitling, deceased, with the original record thereof, now remaining in this office, and have found the same to be a correct transcript therefrom, and of the whole of said original record.

In testimony whereof I have hereunto set my hand and affixed
536 the seal of office of said surrogate this eighteenth day of May, in the year of our Lord one thousand eight hundred and seventy-two.

[L. S.] MORGAN A. DAYTON, J'R,
Clerk to the Surrogate's Court.

[U. S. i r. stamp.]

WASHINGTON, D. C., *Aug. 24th*, 1872.

HON. COMMISSIONER OF PATENTS:

SIR: In the matter of the application of W'm Weitling, for letters-patent for improvement in fluting-machines, filed March 8, 1855, renewed January 7, 1871, I respectfully request that in the issue of the patent my one-half interest, as assigned, may be issued in my name.

Very respectfully,

W'M C. McINTIRE.

(Endorsed:) Patent-Office, August 24, 1872, U. S. A.

Memorandum of fee paid at U. S. Patent-Office.

Inventor, W'm Weitling. Invention, fluting-machine. Date of payment, Aug. 24th, 1872.

537 Patent-Office, Aug. 24, 1872, U. S. A. Fee, $20.
Solicitor, W'm C. McIntire, present.

U. S. PATENT-OFFICE.

Application of W. Weitling. Filed January 7, 1871.

Contents of this file.

Application.
Renewal.
Rejected.
Sub'te specification.
Argument.
Affidavit.
Affidavit.
Rejected.
Amendment and request for int'f.
Letter and request for int'f.
Amendment.
B'f of invention, Aug. 22, 1872.

No. 130962. 1871.

William Weitling, deceased, (Caroline Weitling, adm'x,) of New York, county of New York, State of New York, assignor of one half of this right to W'm C. McIntire, of Washington, D. C.

ROLL FOR FLUTING-MACHINES.

Received, January 7, 1871.
538 Petition, January 7, 1871.
Affidavit, " " "
Specification, " " "
Drawing, " " "
Model in old case, filed March 8, 1855.
Cert. dep.
Cash, $15, January 7, 1871.
Add'l fee cert.
Add'l fee—cash $20, August 24, 1872.
Examined by Commissioner, August 15, 1872.

Issue, Knight, August 23, 1872.
Patented, August 27, 1872.
Recorded, vol. , page .
Circular, August 23, 1872.
W'm C. McIntire, present. 1871.

Original application filed March 8, 1855.
January 7, 1871, renewed. 1872.
January 31, 1871, rejected.
March 6, 1871, spec. to att'y.
August 10, 1871, rejected.
October 6, 1871, declaration of interference, with application of H. J. Cross, filed January 10, 1870.
Henry Lauerbier, July 9, 1870, and March 25, 1871.
Patents to H. G. Pearson, December 21, 1869.
Mary P. Carpenter, June 28, 1870.
C. E. L. Holmes, March 1, 1870, and
Samuel G. Cabell, February 16, 1870.
Ex. J. A. W.

(Endorsed:) Improvement in fluting-machines. 1871.

539 At a stated term of the circuit court of the United States of America for the southern district of New York, in the second circuit, held at the United States court-rooms in the city of New York, on Tuesday, the fifth day of May, in the year of our Lord one thousand eight hundred and seventy-four.
Present, the honorable Samuel Blatchford, circuit judge.

GEORGE E. KING }
vs. }
ROBERT WERNER. }

The above case coming on for final hearing upon pleadings and proofs, M'r Stephen D. Law is heard in behalf of the complainant.

540 At a stated term of the circuit court of the United States of America for the southern district of New York, in the second circuit, held at the United States court-rooms in the city of New York, on Wednesday, the sixth day of May, in the year of our Lord one thousand eight hundred and seventy-four.
Present, the honorable Samuel Blatchford, circuit judge.

GEORGE E. KING }
vs. }
ROBERT WERNER. }

The further hearing in this cause having been adjourned to this day, M'r Stephen D. Law concludes his argument in behalf of the complainant.
M'r Orlando Dorsey is heard in behalf of the defendant.

541 At a stated term of the circuit court of the United States of America for the southern district of New York, in the second circuit, held at the United States court-rooms in the city of New York, on Friday, the eighth day of May, in the year of our Lord one thousand eight hundred and seventy-four.
Present, the honorable Samuel Blatchford, circuit judge.

GEORGE E. KING
vs.
ROBERT WERNER.

The further hearing of the above cause coming on pursuant to adjournment, M'r Orlando Dorsey concludes his argument on behalf of the defendant.

542 At a stated term of the circuit court of the United States of America for the southern district of New York, in the second circuit, held at the United States court-rooms in the city of New York, on Monday, the eleventh day of May, in the year of our Lord one thousand eight hundred and seventy-four.

Present, the honorable Samuel Blatchford, circuit judge.

GEORGE E. KING
vs.
ROBERT WERNER.

The further hearing in the above entitled cause having been adjourned to this day, M'r Stephen D. Law is heard in reply in behalf of the complainants.

Cur. adv. vult.

543 U. S. circuit court.

GEORGE E. KING
vs.
ROBERT WERNER.

BLATCHFORD, J.: This suit is brought on two re-issued letters-patent granted to the plaintiff. One is No. 3000, for an "improvement in fluting-machines." The other is No. 3001, for an "improvement in fluting-puffing." Both of them are dated June 23rd, 1868, and were issued on the surrender of original letters-patent granted to the plaintiff, as inventor, February 26, 1867.

The specification of No. 3001 says:

"My invention consists in the production, as a new article of manufacture, of a puffing applicable to shirt-bosoms, trimming, or other purposes of dress, in which the completed article, prior to laundering or washing, is made up of either a single row, or two or more parallel series of rows, each consisting of flattened borders, with flutes running along their inner edges and a puffed or gathered or crinkled surface or surfaces between the flutes." It further says that the puffing represented in the drawing accompanying the patent consists of flattened portions with flutes arranged along the inside edges of such flattened parts or borders, and with a crinkled or gathered surface to the portions lying between the flutes, longitudinal rows of stitching being afterwards, it may be, passed through the flattened borders at, say, their
544 edges, "to render permanent the conformation of the puffing," and, if necessary, strips or tapes basted on along such flattened parts.

It further says:

"The mechanism, where machinery is used for the purpose necessary to produce a puffing of this character, may be varied, but for the purpose of illustrating how, or one way in which, the same may be done

automatically or by mechanism, it will suffice here to refer briefly to a machine for the purpose, which was secured to me by letters-patent No. 62492 of the United States, bearing date February 26, 1867, and which is now the subject on an application for re-issue. Thus, the piece of muslin or other fabric may be entered through a hollow, inclined guide, formed partly of an arched and partly of a straight form, to or between rollers and pressers, the rollers being made with flattened ends or portions that act in concert with the presses to form the flat portions *h* of the puffing, and with grooves or flutes inside of such flattened ends to establish the flutes *g*, while the intervening portions of the rollers opposite the arched portion or portions of the guide are further from each other, and simply serve to act in a light manner upon the curved surfaces of the puffed, gathered, or crinkled portions *i* of the material, as produced by or through the arched portions of the guide, that give an irregular or wavy surface to such portions, by reason of the width of the material passing out of or through the arched portions of the guide being greater than the distance between the fluted portions of the
545 roller. The longitudinal rows of stitching *s*, in or along the flattened portions *h*, may either be put in by hand or by any suitable sewing-machine. A puffing is thus made having gathered, crinkled, or wavy portions, *i*, without having recourse to laundering or washing to effect such conformation, thereby economizing labor and material and putting the article in a finished state on the market, in that fresh condition which washed goods are devoid of."

The claim is in these words: "The within-described puffing, as a new article of manufacture, the same being formed by crinkling, gathering, or irregularly waving one portion of the strip of muslin or other material, simultaneously with fluting it along the edges of such portion, as at *g*, and forming flattened borders or portions, *h*, outside of the flutes, or between two next adjacent rows of them, to receive stitching, substantially as specified."

The article of manufacture claimed the patentee denominates, as a whole, a "puffing." As he describes it in the claim it consists of a crinkled, gathered, or irregularly-waved portion, of a fluted portion along each edge of such first-named portion, and of a flattened border or portion outside of each fluted portion, to receive stitching, to render permanent the conformation. The specification points out, as features of the article, that it presents the appearance it does without being washed or laundr'ed, and that its gathered, crinkled, or wavy portion has such conformation given to it without having recourse to laundering or washing.

A patent had been granted to the plaintiff on the 23rd of Oc-
546 tober, 1866, for an "improvement in fluted puffing for shirt-bosoms," in which he claimed, as an article of manufacture, what he called a "fluted puffing," made by fluting by mechanism, and in a regular manner, a strip of muslin or other material, throughout its length, and compressing and flattening down the extremities of the flutes, to form straight and regular borders or either and opposite sides of the flutes, and afterwards machine-stitching said borders along and at the union of the borders with the flutes. It is manifest that this article, for the space between the flattened portions, consists, as made, and before being washed or laundried, wholly of flutes; that in order to convert such fluted portion into a crinkled, gathered, or irregularly-waved portion, it is necessary to launder or wash it; and that such conversion can be made by laundering or washing it. Figure 1 of the drawing represents a face view of the puffing "previously to its being washe l," and repre-

sents it as wholly in flutes between the flattened portions. Figure 4 of the drawing represents a face view of the puffing "after having been washed and as sewed between the parts of a shirt-bosom," and represents all the part that is in view, which is the part between the flattened portions, as being crinkled, gathered, or irregularly waved. In view of this patent of 1866, the reference in the specification of re-issue No. 3001 to the formation of the crinkled portion of the puffing without recourse to washing or laundering becomes intelligible.

The specification of No. 3000 says:

547 "This invention is designed for making puffing applicable to shirt-bosoms, trimming, or other purposes of dress, in which the article, as it issues from the machine, is (without having recourse to laundering) delivered in a complete form, either singly or in two or more series or rows, composed of flattened borders with flutes running along their inner edges, and puffed or crinkled surfaces between the flutes. The invention consists in a guide constructed with one or more curved or arched portions, in combination with one or more suitable fluting-rollers, whereby the material, in passing through the machine, is fluted and contracted laterally, as it were, or drawn up between the flutes to produce the required crinkled surface or surfaces in the puffing."

Two fluting-rollers, one above the other, are placed in a frame, with their ends projecting through large vertical slots formed in the ends of the frame. The lower roller is supported in semicircular bearings formed in the lower ends of the slots, and is furnished at one end with a crank. The upper roller works in semicircular bearings formed in sliding blocks placed upon the ends thereof, and pressed down upon the same by a spring, the tension of which may be regulated by a vertical screw, situated centrally in the top of the frame. When desired, the upper roller may be held within a given distance of the lower roller *may be held within a given distance of the lower roller* by vertical set-screws situated one at each end of the top of the frame, and acting upon the sliding or adjustable bearings. The puffing is represented in one

548 of the figures of the drawing, and is formed of strips of any suitable fabric, and of a width, when finished, nearly or quite equal to the length of the fluting-rollers, and is formed with longitudinal portions which are fluted transversely to the length of the strip; also with portions outside of the fluted portions, in which the fabric is pressed flat, and through which longitudinal rows of stitching are formed to render permanent the conformation of the puffing; and also with portions between the fluted portions, which are intended to be wider than the parts just described, and which are puffed or crinkled in such manner as to possess an irregular wavy surface.

In order to form these several portions of the puffing, each of the fluting-rollers is formed with as many annular or circumferential series of grooves and flutes as there are fluted portions upon the puffing, with as many plain, narrow, annular faces as there are flattened portions, and with as many plain and comparatively broad portions as there are puffed portions in the finished puffing, each of the said parts of the rollers being of the same width as that portion of the completed puffing which it is designed to shape, and the plain and comparatively broad circumferential faces or portions being of such diameter that, when the two rollers are in proper position, those upon one roller will be situated at such distance from those upon the other that no considerable pressure will be exerted upon the fabric in passing between them and the sev-

549 eral series of grooves and flutes upon one roller gearing into those upon the roller.

There are pressers; the rearmost end of each one is curved downward and fitted upon the upper rearmost part of each of the plain, narrow, annular faces of the lower roller, while its forward end is curved upward in contact with the forward sides of the corresponding plain, narrow, annular face upon the upper roller, the rearmost ends of the pressers being pressed against the lower roller by set-screws passing through a horizontal bar or brace secured upon the rear of the frame. Fixed upon the forward side of the frame, in front of the lower roller, is a horizontal supporting-brace, which has fixed upon it an inclined plate, upon which is supported an inclined guide, O, which is composed of two pieces of sheet metal, secured one over the other at such a distance apart as to permit the passage of the cloth or fabric between them, and those parts of the guide in front of the plain and comparatively broad cylindrical portions of the rollers are curved up or arched transversely, as shown at *a*, in such manner that the width of the fabric passed between each pair of such plain and comparatively broad portions will be greater if stretched out to its full extent than the width of said portions, so that the fabric, by means of its increased width, will be crinkled or puffed in passing between said portions. The end of the strip of fabric from which the fluted puffing is to be formed is passed into and through the guide, and between the rollers, and a rotary motion is communicated to the rollers.

550 The fabric is drawn lengthwise between the rollers, those portions thereof which pass between the several opposite series of grooves and flutes in the two rollers being fluted, while those portions thereof which pass between the smooth, narrow, annular faces of the rollers, being formed into gathers by the fluting of the fabric at the sides or edges thereof, are pressed flat by passing under the pressers, as the fabric is drawn along, at the same time that those portions of the fabric drawn through the curved or arched parts of the guide, being, if stretched to their full extent, of a width greater than that of the smooth and comparatively broad cylindrical portions, and being also gathered by the fluting formed at their sides or edges, are caused to assume a crinkled or puffed form, as they are passed between the said smooth and comparatively broad portions, the distance between such opposite portions being such that no pressure is exerted upon the fabric passing between them, beyond that required to simply press the convex surfaces thereof downward to a sufficient degree to insure the shaping thereof into the puffed condition just described.

The extent to which the material will be thus contracted laterally, as it were, or drawn up between the flutes, will be governed by the excess in length of the arched portions of the guide over a straight line or lines connecting such arched portions at their base. By these means the fluted puffing is brought into the form required in the finished article without the necessity of washing the same in order to bring the puffing into such form. To complete the puffing, longitudinal

551 rows of stitching are formed in the flat parts of the puffing to retain it in shape.

The foregoing description is found in the specification.

The claim is in these words:

"The guide E, constructed with one or more curved or arched portions, *a*, in combination with suitable fluting-rollers, substantially as herein set forth, for the purpose specified."

In view of the prior existence of the puffing called "Pipo puffing," it is impossible to sustain re-issue No. 3001.

The puffing claimed in that re-issue is claimed as a new article of

manufacture without reference to whether it be made by machinery, or by hand, or how otherwise. Any prior article which had, as its characteristic features as an article of manufacture, the features set forth in that re-issue as the characteristic features of the puffing claimed therein, is an anticipation of the patent. The Pipo puffing was made on a sewing-machine, but it was formed complete without laundering or washing, and it consisted of flattened borders, with flutes running along their inner edges, and a puffed or gathered or crinkled surface between the flutes, and longitudinal rows of stitching were passed through the flattened borders, to render permanent the conformation. The flutes were formed by a process of gathering, and were not as regular and uniform, each flute with every other flute, as where flutes are made by fluting-rollers. But this is a question of degree and of appearance, and not of conformation.

552 The claim of re-issue No. 3001 speaks of forming the puffing by crinkling one portion of the strip "simultaneously" with fluting it along the edges of such portion and forming flattened borders outside of the flutes. If the word "simultaneously" be construed as referring to the idea that, in any given cross-section of the strip, the crinkled portion, the fluted portions, and the flattened borders are formed at one and the same time, then an element is introduced which has regard to something beyond the conformation of the puffing as an article of manufacture and its shape and structure when completed; an element which has to do with the process of making it. The specification, in its descriptive part, in no manner makes any part of the invention to consist in any part of any process of making the puffing, or of any machinery or apparatus for making it, nor does it suggest that the parts embraced in any cross-section are to be made simultaneously with each other, or that any peculiarity in conformation would result from so doing. Therefore such a construction of the word "simultaneously" would make the claim repugnant to the subject-matter of the patent. The only proper construction, then, of the word is that it merely means that in the finished article one portion is seen to be crinkled, and, at the same time, the parts at the edges of such portion are seen to be fluted, and the portion outside of the flutes are seen to be flattened borders.

553 We come now to the consideration of the machine used by the defendant, and alleged to infringe re-issue No. 3000, in making the puffing which is alleged to infringe re-issue No. 3001. The defendant's machine is described in letters-patent granted to him January 7th, 1873, for an improvement in crimping and fluting machines. He used, in connection with fluting-rollers, as the specification of his patent states, "a detent or finger, by which a portion of the fabric is held back, and thereby formed into V-shaped but more or less irregular lateral waves and crinkles."

Between the fluted portions of the fluting-rollers are plain zones. The free end of the detent bears against a platform midway of the plain zones. The fabric in its passage to the rollers passes over the platform and under the detent, which is a spring, and which so presses the fabric against the platform, while the rollers are drawing the fabric forward, as to detain or hold back that portion of the fabric which is so pressed by the detent and cause it to be crinkled in the space between the inner edges of the flutes. This result is attained because the same thing is done as in the plaintiff's machine, that is, the width of the fabric passed between the pair of plain zones is greater than the width of such zones, and as the fluting gathers the fabric the portion of it which passes between the pair of plain zones is crinkled.

The defendant's machine has pressers which make flattened borders along the outer edges of the fluted portions, through which stitching may be made.

The main feature of the plaintiff's machine is the device for pulling away the fabric before the fluting-rollers grasp it too firmly, so
554 as to get the increased width of fabric opposite the pair of plain zones. The plaintiff shows how this is to be done by an arched guide. This arch raises up the fabric. The fabric rides over it and so is pulled away from the fluted parts of the rollers. The obstacle interposed by the arched guide pushes up the fabric to an apex. There would be no difference in mode of operation if the fabric were pushed down to a given point by an arched guide. The defendant interposes an obstacle which pulls back the fabric from the fluted parts of the rollers. The mode of operation is the same as in the plaintiff's machine, and the result is the same. The only difference is that in one the centre of the extra width moves upward as the pull is made, and in the other it does not; but in each the detaining instrument diverts the fabric from what would otherwise be its course, so as thereby to pull out extra width. I think the variation is merely mechanical and not substantial, and that the defendant's machine is an infringement. The detent and the platform form the two surfaces of a guide between which the fabric passes, and these surfaces hold it so as to pull it away from the flutes. The two surfaces of the plaintiff's guide do the same thing.

Re-issue No. 3000 is not successfully attacked as to the novelty of its claim.

As to the Robjohn patent and Robjohn machine and Robjohn guides 1 and 2, the machine was designed to make two double-fold ruffles at one and the same time. It has no provision for taking up an in-
555 creased width of material or for crinkling a central portion of the material. Nor could such guides, or the guides S and T, produce, in connection with the Robjohn machine, the results produced by the mechanism covered by the claim of the re-issue No. 3000. The flat Muller guide No. 5 falls within the same category. The Muller guide No. 5 with the arched projection has not two surfaces between which the material passes, and used, as it always was, with the Muller rings Nos. 3 and 4, which were diamond embossing rings, and made a diamond figure on the material, and occupied all the space not occupied by the fluting-rollers, it does not present the combination set forth in the claim of re-issue No. 3000, for the purpose specified in that re-issue.

The Weitling machine and apparatus, whether as originally presented to the Patent-Office, or as existing and used before King's invention, did not contain the combination of the claim of re-issue No. 3000.

Moreover, such use as was made of it before King's invention was wholly experimental, and it was abandoned by its inventor, as an abortive experiment.

There must be a decree for the plaintiff as to re-issue No. 3000 for an account of profits and damages, with an injunction, with costs.

In the two suits brought against venders of puffing, on re-issue No. 3001, the bills must be dismissed with costs.

S. D. Law and M. A. Kursheedt for the plaintiff.
O. Dorsey for the defendants.

556 (Indorsed:) U. S. circuit court. George E. King vs. Robert Werner. Decision. August 13th, 1874. Filed August 13, 1874.

557 At a stated term of the circuit court of the United States of

America for the circuit and southern district of New York, held at the city of New York on the 13th day of Jan'y, 1875—

Present, the Hon. Samuel Blatchford, dist. judge.

GEORGE E. KING)
vs.
ROBERT WERNER.)

This cause having been brought to a final hearing upon the pleadings and proofs, and S. D. Law, esq., & M. A. Kursheedt, esq., having been heard on the part of the complainant, and Orlando Dorsey, esq., on behalf of the defendant, and the same having been duly considered by the court: Now, at this term of said court, on motion of M. A. Kursheedt, esq., solicitor for complainant, it is found and hereby ordered, adjudged, and decreed that the re-issued latters-patent No. 3000, granted June 23rd, 1868, unto George E. King, being the patent referred to in the complainant's bill, is a good and valid patent, and that George E. King was the original and first inventor of the improvements described and claimed in the said patent, and also that the said
558 defendant have infringed upon the said patent, and upon the exclusive rights of the complainant under the same.

And it is further ordered, adjudged, and decreed that the complainant do recover of the defendant the profits, gains, and advantages which the said defendant, & which by stipulation are assessed at six cents, has received or made, or which have arisen or accrued to him from said infringement of the said patent by the manufacture, use, or sale of the improvements described and secured by the said re-issued letters-patent No. 3000.

And it is further ordered, adjudged, and decreed that the said complainant do recover of the defendant his costs and charges and disbursements in this suit heretofore taxed at $588.45.

SAM'L BLATCHFORD.

559 (Endorsed:) U. S. circuit court. King vs. Werner. Final decree after taken of costs. M. A. Kursheedt, compl't's sol'r. Thornton. Jan'y 13, 1875.

We consent to the enter. of that as the final decree in this case.

M. A. KURSHEEDT,
Compl't's Sol'r.
ORLANDO DORSEY,
Def'ts' Solicitor.

560 Supreme Court of the United States.

GEORGE E. KING, APPELLEE,)
vs.
ROBERT WERNER, APPELLANT.)

To the honorable the Supreme Court of the United States:

The appeal of Robert Werner, the above-named defendant and appellant, respectfully showeth:

That upon the twenty-fourth day of October, 1871, the above-named complainant filed his bill in the circuit court of the United States for the southern district of New York against the above-named defendant, alleging that this defendant and appellant did infringe on two certain re-issued letters-patent, which were re-issued to the said complainant on the twenty-third day of June, 1868, being re-issues in two divisions of a

prior letters-patent granted to the complainant on the 26th day of February, 1867, for an alleged improvement in fluting-machines, the
561 first of said re-issued letters-patent being numbered 3000, and granted for an alleged improvement in fluting-machines, and the second of said re-issued letters-patent numbered 3001, and granted for an alleged improvement in fluted puffing, the said bill showing the issue of said letters-patent and re-issued letters-patent, and charging this defendant and appellant with infringement thereof by constructing, putting in operation, using, and selling machines for making fluted puffing, and by making and selling fluted puffings, made, as the bill alleged, according to the alleged invention and re-issued letters-patent of the complainant; the said bill further praying that the said defendant and appellant be restrained and enjoined from such alleged infringement and from using such machine, and making or selling such fluted puffing, and be compelled to account for and pay to the complainant the gains and profits received by the defendant and appellant from such alleged infringement, and the damages which the complainant alleged he had sustained therefrom: to which bill the defendant and appellant made answer, filed January
562 10th, 1872, and an amended answer, recorded by consent of counsel for both parties, and signed September 19th, 1872, and a further amended answer filed, by consent of counsel for both parties, February 23rd, 1874, denying that the complainant was the first and original inventor of the alleged improvements claimed in said re-issued letters-patent, and averring that the said alleged improvements were well known and in public use in the United States before the complainant, as alleged by him, invented the same, and denying that this defendant and appellant ever made fluted puffings as described in said re-issued letters-patent, and averring that the trimmings made and the machine used by this defendant and appellant were made and used by him under protection of letters-patent granted to him, this defendant and appellant; and the complainant filed his replication to said answer on the fourth day of March, 1872, and both parties took proofs in said suit, and the said suit was brought on for final hearing before the said circuit court in the April term of the year 1874, upon the pleadings and
563 proofs therein, whereupon the said court on such hearing decided that said re-issued letters-patent, numbered 3001, was not a valid letters-patent, and that the bill be dismissed with costs as to the said re-issued letters-patent numbered 3001; but that the re-issued letters-patent numbered 3000 were valid, and that this defendant and appellant had infringed the rights of the complainant under the same, and ordering that a decree be rendered accordingly, and an injunction issue restraining this defendant from the further use of his machines for making fluted trimmings.

That thereupon an injunction was made in this cause, as ordered, and is now still in effect; and that on the 13th day of January, 1875, a final decree was made and pronounced in the cause, wherein it was, in substance, adjudged and decreed that the defendant and appellant pay costs and damages to the complainant for the use by this defendant and appellant of the machines for making fluted trimmings.

Wherefore this appellant appeals from so much of said decree of said circuit court of the United States as sustains the validity of the
564 said re-issued letters-patent numbered 3000, and adjudges this appellant an infringer thereof, and respectfully prays that the decree of the said circuit court, and the bill, answer, amended answers, pleadings, depositions, evidence, and proceedings in the said cause may

be sent to the Supreme Court of the United States without delay, and that the said Supreme Court may proceed to hear the said cause anew, and that so much of the said decree of the circuit court as sustains the validity of said re-issued letters patent numbered 3000, and adjudges this appellant an infringer thereof, may be reversed, and a decree made dismissing the whole of said bill with costs, with such other decree as to the said Supreme Court shall seem just.

A. V. BRIESEN,
Of Counsel for Def't and Appellant.

Dated New York, Jan. 23, 1875.

565 (Endorsed:) U. S. Supreme Court. George E. King, appellee, vs. Robert Werner, appellant. Petition of appeal. Respecting re-issued patent 3000. A. V. Briesen, of counsel for def't. Filed Jan'y 23, 1875.

566 Supreme Court of the United States.

GEORGE E. KING, APPELLEE,
vs.
ROBERT WERNER, APPELLANT.

Know all men by these presents, that we, Robert Werner, of the city of New York, and Herman H. Luehrs, of Hoboken, Hudson County, New Jersey, are held and firmly bound unto George E. King, of the city New York, New York, in the sum of eleven hundred and eighty dollars, lawful money of the United States of America, to be paid to the said George E. King, his executors, administrators, or assigns; for which payment, well and truly to be made, we bind ourselves, our heirs, executors, and administrators, jointly and severally, firmly by these presents. Sealed with our seals, dated the twenty-second day of January, one thousand eight hundred and seventy-five.

Whereas the above bounded Robert Werner hath taken an appeal to the Supreme Court of the United States to reverse the decree
567 rendered in the above-entitled action by the circuit court of the United States for the southern district of New York:

Now, therefore, the condition of this obligation is such that if the above-named Robert Werner shall prosecute his said appeal to effect, and answer all costs and damages if he shall fail to made good his plea, then this obligation shall be void.

ROBERT WERNER.
HERMAN H. LUHRS.

Sealed and delivered in presence of—
A. V. BRIESEN.

The foregoing bond is approved.
January 23rd, 1875.

SAML BLATCHFORD,
District Judge.

(Indorsed:) Supreme Court U. S. George E. King, appellee, &c., vs. Robert Werner, appellant. Bond on appeal and justification. Filed Jan'y 23, 1875.

SOUTHERN DISTRICT OF NEW YORK, *ss:*

Robert Werner, of New York City, New York, and Herman H. Luehrs

of Hoboken, New Jersey, being severally duly sworn, depose
568 and say, and each for himself saith, that he is worth the sum of two thousand dollars over and above all his just debts and liabilities.

ROBERT WERNER &
HERMAN H. LÜHRS.

Sworn to before me this 22nd day of January, 1875.

JOHN A. SHIELDS.
U. S. Comm'r, S. D. of N. Y.

569 By the honorable Samuel Blatchford, one of the judges of the circuit court of the United States for the southern district of New York, to George E. King:

Whereas Robert Werner has lately appealed to the Supreme Court of the United States from a decree lately rendered in the circuit court of the United States for the southern district of New York, made in favor of you, the said George E. King, and has filed the security required by law, you are, therefore, hereby cited to appear before the said Supreme Court at the city of Washington on the second Monday of October, 1875, to do and receive what may appertain to justice to be done in the premises.

Given under my hand at the city of New York, in the southern district of New York, in the second circuit, the 23rd day of January, in the year of our Lord one thousand eight hundred and seventy-five.

SAM'L BLATCHFORD.

570 (Endorsed:) U. S. circuit court southern district of N. Y. Geo. E. King, appellee, vs. R. Werner, appellant. In equity. Citation. A. V. Briesen, for def'ts. Service admitted Jan. 25, '75. M. A. Kursheedt, sol'r for comp. Filed Jan. 26, 1875.

571 Supreme Court of the United States.

GEORGE E. KING, APPELLEE,
v.
ROBERT WERNER, APPELLANT. } In equity.

It is hereby stipulated and consented that the drawings, books, implements, machines, models, and samples of goods put in evidence in the above action in the circuit court of the United States for the southern district of New York, by the complainant and defendant, be sent on to the Supreme Court in the appeal taken herein, and that the same be returned to the clerk of said circuit court after the final determination of said appeal.

M. A. KURSHEEDT,
Compl't's Sol'r in Circuit Court.

New York, July 22, 1875.

Ordered accordingly.

SAM'L BLATCHFORD.

(Endorsed:) Filed July 22, 1875.

572 UNITED STATES OF AMERICA,
Southern District of New York, ss:

I, Kenneth G. White, clerk of the circuit court of the United States of America for the southern district of New York, in the second circuit,

do hereby certify that the foregoing pages, numbered from one to 571, inclusive, contain a true and complete transcript of the record and proceedings had in said court, in the case of George E. King against Robert Werner, as the same remain of record and on file in said office.

In testimony whereof, I have caused the seal of the said court to be hereunto affixed, at the city of New York, in the southern district of New York, in the second circuit, this eleventh day of August, in the year of our Lord one thousand eight hundred and seventy-five, and of the Independence of the said United States the one hundredth.

[SEAL.] KENNETH G. WHITE, *Clerk.*

(Indorsement on cover:) No. 94. Robert Werner, appellant, vs. George E. King. S. New York, C. C. U. S. Filed 17th August, 1875.

C

Supreme Court of the United States.

OCTOBER TERM, 1877.—No. 94.

ROBERT WERNER,
Appellant.
vs.
GEORGE E. KING.

Appeal from the Circuit Court of the United States for the Southern District of New York.

BRIEF FOR APPELLANT.

ARTHUR v. BRIESEN,
Of Counsel for Appellant,
No. 258 Broadway,
NEW YORK CITY.

NEW YORK,
M. W. SIEBERT, PRINTER, 26 & 28 FRANKFORT STREET, NEW YORK.
1877.

Supreme Court of the United States.

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ROBERT WERNER,
Appellant.
vs.
GEORGE E. KING,
Appellee.

Appeal from the Circuit Court of the United States for the Southern District of New York.

ARGUMENT FOR THE APPELLANT.

STATEMENT OF THE CASE.

This suit was brought by the complainant below and appellee, King, against the defendant below and appellant, Werner, for alleged infringement of an invention, for which a patent was granted to said King, February 26, 1867, for an improvement in Fluting Machines. The patent was reissued in two divisions, June 23, 1868; one division, Reissue No. 3000 being for the improved machine, and the other division, Reissue No. 3001, for the fabric produced on such machine. The suit was originally brought for alleged infringement of both said Reissues, as appears from the Bill of Complaint; but the Court below held the second division of the Reissue, which sought to cover the fabric or puffing produced on King's patented machine to be invalid, as it was anticipated by the public use and sale in this country of similar or the same fabrics by others, before said King invented the same.

The opinion of Judge Blatchford in the Court below (pages 261 to 266 of the record) states, that the suits brought against vendors of puffing on Reissue No. 3001 must be dismissed with costs. No appeal was taken from said decision, as far as regards Reissue No. 3001, and it must therefore be assumed as fnlly established, that said King was not the first inventor of the fabric which his machine produces. The Court below, however, held that he was the first inventor of the machine described in the Reissue No. 3000, and also that the defendant, Werner, by the use of a certain machine for making fluted trimmings, infringed upon said Reissued Patent No. 3000. From this opinion and decision the appeal has been taken.

The Reissued Letters Patent No 3000, (reproduced on pages 13 to 16 of the record), describes a machine for making puffing applicable to shirt-bosoms or other purposes of dress, in which the article as it issues from the machine, is delivered in a complete form, either singly or in two or

more series or rows, that are composed of flattened borders with flutes running on the inner edges and puffed or crinkled surfaces between the flutes. The invention is described to consist:

"In a guide, constructed with one or more curved or arched partitions, "in combination with one or more *suitable* fluting rollers, whereby the "material, in passing through the machine, is fluted and contracted "laterally, as it were, or drawn up between the flutes to produce the re- "quired crinkled surface or surfaces in the puffing."

The drawing of the said Patent illustrates, and the specification further describes the machine to be composed of a suitable frame, in which are hung two horizontal parallel fluting rollers, arranged one over the other, so that the flutes or teeth of one mesh into and between the flutes or teeth of the other. In fact, as far as these rollers are termed "fluting rollers," they differ in no wise from ordinary gear or toothed wheels. But between each pair of flutes or toothed zones of each roller there is a smooth zone, which is intended and shown to be wider than the fluted parts just described.

In line with each pair of these broader smooth zones of the two contiguous rollers, there is placed upon the frame of the machine an arched guide, the same being:

> "*Composed of* TWO PIECES OF SHEET METAL, *secured one over the other, at such a distance apart as to permit the passage of the cloth or fabric between them; and those parts of this guide in front of the plain cylindrical portions of the rollers are* CURVED UPWARD OR ARCHED TRANSVERSELY *as shown at* a' *in the drawing, so that the width of the fabric passing between each pair of the plain portions will be greater if stretched out to its full extent, than the width of the said portions, so also that the said fabric by means of its increased width will be crinkled or puffed in passing between the aforesaid smooth portions of the rollers.*"

In other words, the fabric, as it is fed to the rollers is elevated into a longitudinal wave or curved, continuous ridge by the arched guide, which continuous wave or ridge is then, as it enters between the rollers, by partial pressure upon the ridge, caused to assume the desired puffed or crinkled outline. The distance between the opposite smooth portions of the rollers above referred to is such, that

> "*No pressure is exerted upon the fabric passing between them, beyond that required to simply* PRESS *the convex surface thereof downward to a sufficient degree to insure the shaping thereof into the puffed condition referred to.*"

Every pair of fluted or toothed zones having one of the wider flat zones between them, is flanked by an outer pair of narrow flat zones, between which the borders of the fabric are caused to be flattened by pressers properly placed for that purpose onto the rollers.

The construction of the rollers does not constitute part of the claim nor that of the pressers, nor is the guide claimed by itself, but the claim is for

> "*The guide* E *constructed with one or more curved or arched* "*portions* a' *in combination with* SUITABLE *fluting rollers, sub-* "*stantially as herein set forth for the purpose specified.*"

The patentee, King, in his original application [Exhibit, File Wrapper

62,492, offered in evidence, page 160 of the Record] did indeed attempt to claim the construction of the rollers by submitting the following claim:

> "2d. *I claim the construction of the two fluting rollers* B. C. "*with plain portions* C' *intermediate to and recessed below the* "*fluted portions, in such a manner that the required portion of* "*the fabric, in passing between them is left free to assume the* "*puffed condition, substantially as herein described.*"

This claim was rejected by official letter, dated November 12, 1866, of which the following is a copy:

> "*United States Patent Office,* }
> *November* 12, 1866. }
>
> "*Rollers constructed substantially like your fluting rollers are* "*common in shirt-bosom machines. The depression, you describe,* "*brings up a question of degree in an old device, in which the de-* "*pression has always been optional. Specification and draft sent* "*for revision of claim.*"

Upon receipt of this rejection the said King by Amendment, dated November 16, 1866, under his own signature withdrew the second clause of claim, referred to; all of which appears from said File Wrapper.

The proofs adduced by the defendant and appellant in this cause, establish with absolute certainty, that arched guides in every respect like that of complainant's Patent have been commonly used in this country in connection with fluting rollers prior to said King's invention. The decision of the Commissioner of Patents respecting the claim for the fluting rollers alone, and the acceptance thereof by the patentee, is conclusive proof that the latter was not the inventor of the rollers themselves. The patentee was therefore not the inventor of either one of the ingredients of his claim, and his claim is therefore necessarily narrowed down to a specific combination, which is composed of two members, one being the transversely arched guide and the other, *suitable* fluting rollers as specified.

The defendant R. Werner admittedly uses a machine (Exhibit Werner Machine) for which he obtained Letters Patent No. 134,621, January 7, 1873. This patent is reproduced on pages 233 to 235 of the record, and although it was not mentioned in the original answer yet by special stipulation, bearing date September 19, 1872, and printed on pages 31 and 32 of the record, it was agreed by the attorneys for the respective parties to this suit, that

> "*The defendant have the right to put in evidence the Werner* "*invention and application for patent, and Werner patent, if* "*granted, before the testimony closes and Werner's patent already* "*granted and the File Wrapper,* WITH THE SAME EFFECT AS IF "SUCH INVENTION AND PATENT HAD BEEN SET UP IN THE ANSWER "*and said answer shall be considered amended in this respect.*"

On November 18, 1872, the complainants counsel specially called for the copy of Werner's application for a patent, then pending, (page 170 record) and the patent was thereupon offered in evidence by the defendant (page 237 record). The Werner machine shows and the Werner patent describes and illustrates two fluting rollers of substantially the same construction as King's fluting rollers, but instead of the transversely arched guide, and, in fact, instead of any guide whatever, said machine employs a spring detent which is placed in line with the broader smooth portions

of the rollers, and which is not transversely arched in any respect. The said spring detent is caused to press *upon* the fabric and to press the fabric firmly against a fixed platform before it enters between the fluting rollers and to hold back those portions of the fabric which are in line with the plain zones. The fluting rollers draw the fabric forward or feed and thereby *counteract* the effect of said detent, and in so doing, the fabric is drawn into a series of V shaped corrugations which are formed by the detent and which remain unchanged on their passage between the fluting rollers. (Renwick answer 10, page 198 of record).

The claims of the *Werner* Patent, which it is important here to consider, are as follows: (page 235).

> "*First:—The* DETENT *D, arranged in combination with "the fluting rollers BB, to produce the crinkles or puffing on the "fabric which is partially fluted as set forth.*"
>
> "*Second:—The platform arranged in combination with the "detent D and rollers B, as specified.*"

It will be observed by a comparison of the two machines and also of the testimony bearing upon the same, especially that of the renowned expert, Renwick, that in the King machine the arched guide does not produce puffings or crinkles, or equivalent puckerings of any kind, but it *does* produce a continuous longitudinal wave in the fabric, which wave is by the slight pressure of the rollers transformed into the puffing or crinkles which it is desired to produce. These puffings or crinkles after they have been produced by the rollers have no longer the form of a continuous longitudinal wave, imparted by the transversely arched guide. The guide therefore is instrumental only in feeding or supplying to the rollers the excess of material which is necessary for the production of the puffings between the rows of the fluting. Otherwise the arched guide has no effect on the fabric whatsoever. On the Werner machine, on the contrary, the *spring* or *detent* produces the corrugations, puffings or crinkles, and the rollers *do not*, in any degree whatsoever, change that configuration in the fabric which has been produced by the detent. (Werner answer 23, pages 142 and 149).

It follows that if the King patent is to be construed as covering any and every mechanism for producing the puffings, the detent of Werner's patent and of Werner's machine alone must be held to perform that service, for it clearly appears by an inspection of the Werner machine and also from the testimony (answer 23, page 149) that the V shaped folds or corrugations can be made on the Werner machine without the rollers by taking hold of the fabric on two sides and drawing it through beneath said pressure-spring or detent.

The proofs produced by the complainant are confined to that of a single witness, Kittle, who acts as an expert, and who, although he testifies to a certain similarity between the Werner and the King machines, nevertheless, carefully abstains from holding the Werner detent to be in any manner the *equivalent* of the arched guide, described in the complainant's patent. On the contrary, he distinctly testifies in answer to question 203, page 57 of the record that in his opinion:

> "*It would be impracticable to produce the fluted puffing . . . . "and manufacture it, without the employment of some analogous "device with an organized machine for that purpose substantially "like Exhibit Reissue No.* 3000, WITHOUT INVENTING."

In answer to question 210, on page 59 the same witness testifies as follows:

> "*I will not pretend to say but that such trimming could be "made on such a machine, provided some device* SUBSTANTIALLY "DIFFERENT *were substituted in place of the arched guide on such "a machine, and the same be done successfully.*"

In the absence of any proof by an expert or person skilled in the art, tending to show that the defendant's combination is the equivalent of the complainants combination, the testimony of the defendant's expert Renwick, in distinctly maintaining that the Werner spring is *not the equivalent* for the arched guide of complainant's Patent (see answer 10 page 198, also answer 100 page 239 and answer 101 page 240) invites the serious attention of the Court and leaves this portion of the matter at issue—unless the Court should deem itself justified in disregarding the testimony of both experts—as fully proved, in harmony with the theory of the defense.

The following is Mr. Renwick's testimony, herein above referred to:

(Ans. 10, *p.* 198, 2*d* §.*)* *The said two combinations are substantially different from each other in the respect of the construction and operation of the combination; thus the first implement of the combination recited in the claim of "Exhibit, Reissue* 3000*" has one or more portions of its breadth curved or arched* TRANSVERSELY, *so as to curve the material passed through it, and thereby cause it to occupy less breadth, horizontally, than it did before passing through the said implement, the peculiar curved or arched form of the implement having the effect of producing the said horizontal contraction. No similar curved or arched construction exists in the Werner implement for operating upon the fabric before it enters the rollers, and* NO EQUIVALENT *for such construction is found in the "Exhibit, Werner Machine."*

Q. 100. (*p.* 239.) *So far as you know, was the implement used in the Werner machine for operating on the fabric in advance of the fluting rollers, known at the date of the original patent of King?*

A. So far as I know, the implement used in the Werner machine for operating on the fabric in advance of the fluting rollers, which said implement consist substantially of a flat plate (upon which the material lies) and of a narrow strong spring, arranged above the said plate, (so as to bear upon the upper surface of the material and detain the narrow portion upon which it presses) WAS NOT KNOWN *at the original Patent of King.*

Q. 101, (*p.* 240.) *As far as you know, was the said Werner implement ever known as an equivalent or a substitute for the King guide, described in Reissue No.* 3000?

A. So far as I know. it was not known either as an equivalent or a substitute for the King guide.

As against the validity of the complainants patent the defendant produces evidence of prior public use of similar machines by several witnesses named in the answer or otherwise admitted by special stipulations. The defense also produces a certain machine called the "Weitling Machine" and proof that the same was made in 1855 by its inventor, W. Weitling; that it was frequently used by him, by his wife and others; that many saw its operation and understood it, and that the machine was capable of producing and actually did produce puffed fluted trimmings

absolutely identical with that produced on the King machine and that it was and still is like King's machine in all essential particulars. Said Weitling in 1855 applied for a patend for his machine, but is was refused (Weitling application p. 244, 245 of record). Subsequently under the provisions of section 35 of act of July 8, 1870, he renewed his application in the year 1871 with better success and obtained a patent, which is in evidence. The defendant also relies upon a certain patent granted to J. Robjohn, April 19, 1864, which patent is also in evidence, and proof is brought of the prior existence of a machine called the Robjohn machine, which also consists of fluting rollers, having plain zones between rows of fluting teeth and arched guides in line with such plain zones. The defense has also produced in evidence the Mueller guides in order to show that the same, which are transversely arched guides, were frequently used more than two years before King's application for his patent in connection with fluting rollers, having plain zones between rows of fluting and in addition thereto diamond shaped embossing projections and recesses on said plain zones. The Mueller arched guide was always placed in line with said plain zones, carrying said diamond shaped projections and recesses.

As to the Weitling machine it is composed of two rollers carrying removable rings, some of which are toothed and some plain, so that it can be adjusted to produce any kind of fluted or embossed or puffed trimming and when these rings are so adjusted, which the proofs show to have actually been done, that on each roller there are two or more flat rings of smaller diameter held between two or more fluted rings which in turn are placed between two or more flat rings, that then, each of said rollers of such machine is identical with the rollers of King's machine and capable of producing puffed fluting or fluted puffing the same as is done on King's machine. (Renwick answer 4, p. 192, also answer 83, 84 & 85, p. 237 and answer 91, p. 238.) In conjunction with these rollers Weitling in 1855 and ever since has used an arched guide, being a bar placed parallel with and in front of the rollers and provided with transversely arched protuberances over which the fabric as it passes to the rollers, is formed into continuous longitudinal waves, the same as it is formed by the King arched guides. —

This being the state of facts as it appears from a careful perusal of the testimony it is difficult to understand, that the Court below nevertheless, held the King Patent Reissue No. 3000 to be valid and the defendant's Werner machine to be an infringement thereof.

The portion of the opinion of the Court below which relates to the matter in controversy in this appeal will be found on page 266 of the record, and is in the following words:

> *" The main feature of the plaintiff's machine is the device for pulling away the fabric before the fluting rollers grasp it too firmly, so as to get the increased width of fabric opposite the pair of plain zones. The plaintiff shows how this is to be done by an arched guide. This arch raises up the fabric. The fabric rides over it, and so is pulled away from the fluted parts of the rollers. The obstacle interposed by the arched guide pushes up the fabric to an apex. There would be no difference in mode of operation, if the fabric were pushed down to a given point by an arched guide. The defendant interposes an obstacle which pulls back the fabric from the fluted parts of the rollers. The mode of operation is the same as in the plaintiff's machine, and the*

result is the same. The only difference is, that, in one the center of the extra width moves upward as the pull is made, and, in the other it does not; but, in each, the DETAINING *(sic.) instrument diverts the fabric from what would otherwise be its course, so as thereby to pull out the extra width. I think the variation is merely mechanical and not substantial, and that the defendant's machine is an infringement. The* DETENT AND THE PLATFORM FORM THE TWO SURFACES OF A GUIDE, BETWEEN WHICH THE FABRIC PASSES, *and these surfaces* HOLD IT *(sic.) so as to pull it away from the flutes. The two surfaces of the plaintiff's guide do the same thing.—(?)*

Reissue No. 3000 *is not successfully attacked as to the novelty of its claim.*

As to the Robjohn Patent, and Robjohn machine, and Robjohn guides 1 *and* 2, *the machine was designed to make two double-fold ruffles at one and the same time. It has no provision for taking up an increased width of material, or for crinkling a central portion of the material. Nor could such guides, or the guides* S *and* T, *produce, in connection with the Robjohn machine, the results produced by the mechanism covered by the claim of Reissue No.* 3000. *The* FLAT *Mueller guide No.* 5 *falls within the same category. The Mueller guide No.* 5, *with the* ARCHED *projection, has not two surfaces between which the material passes; and, used, as it always was, with the Mueller rings Nos.* 3 *and* 4, *which were diamond embossing rings, and made a diamond figure on the material, and occupied all the space not occupied by the fluting rollers, it does not present the combination set forth in the claim of Reissue No.* 3000, *for the purpose specified in that reissue.*

The Weitling machine and apparatus, whether as originally presented to the Patent Office, or as existing and used before King's invention, did not contain the combination of the claim of Reissue No. 3000. *Moreover, such use as was made of it before King's invention, was wholly experimental, and it was abandoned by its inventor, as an abortive experiment.*

There must be a decree for the plaintiff as to Reissue No. 3000, *for an account of profits and damages, with an injunction, with costs."*

ASSIGNMENT OF ERRORS.

It is believed that the Court below erred on the following grounds:

First:—In regarding the Weitling machine and its prior use "as wholly experimental, as abandoned by its inventor, and as an abortive experiment."

Second:—In failing to perceive that the Weitling machine as it has been used according to the proofs, was, and still is, a full anticipation of the complainant's patent, in that it shows the same combination of an arched guide with suitable fluting rollers.

Third:—In failing to hold that the Robjohn patent and machine contain, show and describe the combination of an arched guide with suitable fluting rollers, substantially as described and claimed in King's Patent.

Fourth:—In failing to hold that the Mueller guides and Mueller rollers embody the combination of an arched guide with suitable fluting rollers substantially as described and claimed in King's Patent.

Fifth:—In holding the invention described and claimed in King's Patent Reissue No. 3000 to be a new and patentable invention at the time of King's application for his patent.

Sixth:—In holding the Werner machine to be an infringement of complainant's Patent Reissue No. 3000, and the Werner detent or finger to be the equivalent of the arched guide shown in King's Patent.

BRIEF.

First:—*The Weitling machine is not an abandoned experiment.* The identical exhibit, marked "Weitling machine," was made in 1855, for its inventor W. Weitling, by a mechanic Joseph Mueller, whose original receipt for the amount paid him for said machine, dated May 5, 1855, is in evidence and reproduced on page 230 of the record (see answer of Mrs. Weitling to question 45, page 123 of the record). The machine was frequently used after 1855, and during the years 1856 and 1857, and afterwards for making samples and patterns, and upon it were made all kinds of fluting, puffings, etc., the variations being produced by changing the rings on the spindles. (Answers 46, 48 to 50, page 123). It did in the year 1855 and frequently afterwards produce the puffing, marked "Exhibit Weitling Puffing No. 2." (Mrs. Weitling answer 55, page 143, answers 56 to 58, page 144, answer 214 and 215, page 229) which puffing is *identical* with that produced on King's machine Reissue No. 3000. See answer 12 of Mr. Renwick, pages 202 and 203 of the record, from which the following is quoted:

"Exhibit Weitling puffing No. 2 is in my opinion in all respects ident-
"ical with the said patented puffing, both as an article of manufacture,
"and as presenting substantially the same design."

Weitling did not make and use said machine for experimental purposes only, but he made fluted puffings thereon for merchants in 1855 for mantilla-trimmings (answer 60, page 144). The machine, marked "Weitling machine," is the same identical machine which was made in 1855 (Mrs.

Weitling answer 61 and 62, page 144). (Toedt answer 6 to 16, page 124), and the "Weitling bar" which is the rod or roller with the protuberances above referred to, was also used in 1855 (answer 65 to 72, page 145) and was essential to make puffing like Weitling puffing No. 2, (answer 72 and 73, page 145; answer 195, page 227, and answer 122, page 132). The original bar, "Weitling bar," has been lost, but that on the Exhibit is exactly like the first (Weitling answer 79, page 146; answers 198 to 200, page 228. See also Werner answer 121, page 171; answer 171 to 174, page 177, and answer 199, page 190; also Körbel answer 3, page 178, 8 and 9, page 179). In 1865 the machine was advertised for sale and many persons came and saw it (Weitling answer 80, page 146; also Toedt answers 44 and 45, page 127; answer 56 to 59, page 128). Mr. Werner, the defendant herein, saw the same machine in 1863 (Weitling answer 85, page 146; Toedt answer 129 to 130, page 133; also Werner answer 42, page 158; answer 121 to 122, page 171; answer 129 to 133, page 171, and answer 134, page 172). So also did the witness Körbel see the same machine in May or June 1863 (Körbel answer 3, page 178, and answer 50, page 182), and saw it at that time with the Weitling bar (answers 8 and 9, page 179). The machine was explained to him by Weitling at that time to wit in 1863 (answer 5, page 178; answer 14, page 179), and Mr. Weitling then told him that he could make puffing like Exhibit Weitling No. 2 on said machine (answers 17 to 19, page 180; answer 54, page 182; answer 56, page 182, and answers 60 and 61, page 183.) The bar, Exhibit Weitling bar is exactly like that which the witness saw in 1863 (answer 95, page 187.) The witness fully describes the puffing which he saw in 1863, and that the same was clearly like Exhibit Weitling puffing No. 2, (answer 92, page 187; answer 97, page 188, and answer 99, page 188.)

Not only was this machine therefore made and used by the inventor and advertised for sale and exhibited to many persons and is still in the memory of several persons (four of whom were on the stand in this case), but similar machines of the same construction were made by Weitling in 1855. One such machine was sent to England in 1855 (Weitling answer 86, page 146, answer 96, page 150 and Toedt answers 46 to 50, page 127.)

The letter marked "Sully Letter," reproduced on pages 229 and 230 of the record and dated June 5, 1855, came from England from the party to whom the machine was delivered on the 30th day of April 1855, as appears from the receipt marked "Sully Receipt," which is reproduced on page 230 of the Record. Three more such machines were sent to France in 1855 (See Weitling answer 113 and 115, page 153). The receipt for the first two of these machines is marked "Weissenberger Receipt," dated May 12, 1855, and is in evidence and reproduced on page 231 of the Record; the date, as printed into the record is 1872 instead of 1855; but that this is an error appears clearly from the inspection of the original Exhibit. Several letters—Weissenberger Letters—in evidence were received from the party holding these machines (Weitling answer 116 and 117, page 153), and one of these was exhibited at the Universal Exposition held in Paris, France, in the year 1855, as appears from the French certificate, Exhibit, dated July 16, 1855, reproduced on page 232 of the record which certificate as appears further from the copy of the French law of May 2, 1855, reproduced on page 231 and 232 of the record, had *the effect of a French patent.*

In the year 1855 the said Weitling made application for a patent in the United States; the copy of the application and File Wrapper will be

found on pages 244 to 247 of the record. This application dated March 8, 1855, illustrates fully the Weitling machine in all those features thereof which the inventor deemed important, to wit: the arrangement of the flat and fluting rings on the rollers and their adjustability. The application was rejected and nothing further came of it until after the passage of the law of July 8, 1870. Section 35 of this law provides:

> "*That when an application for a patent has been rejected or "withdrawn prior to the passage of this act, the applicant shall "have six months from the date of such passage, to renew his ap- "plication or file a new one, and if he omit to do either, his "application shall be held to have been abandoned. Upon the "hearing of such renewed applications, abandonment shall be con- "sidered as a question of fact.*"

Under this law William Weitling, on the 30th day of December 1870, (see the date of his oath, page 250 of record) four weeks before his death (he died January 25, 1871, see first two lines page 226), renewed his application. The question of abandonment was thereupon considered by the Commissioner of Patents, as required by statute and he decided that the invention had not been abandoned, that Weitling was entitled to his Patent. The patent was thereupon issued. It is in evidence and reproduced on pages 161 and 162 of the record.

In view of all these facts the Court below held "that such use of the Weitling machine as was made of it before King's invention was *wholly* experimental and that it was *abandoned by its inventor* as an *abortive experiment.*"

Now it is in the first place immaterial whether or not Weitling subsequently abandoned his invention, for this Court has held in the case of *Coffin* vs. *Ogden*, 18 Wallace, page 120,

> "*That, where a prior machine was known to five persons, and "probably to many others, put in use, tested and successful, the "case is brought within the established severe tests required by "law to sustain the defense; and that prior knowledge and use by "a single person is sufficient—the number is immaterial.*" *See also Bedford vs. Hunt*, 1 Mason, 302.

Inasmuch therefore as in the present case it has been cleary shown by four different witnesses, all of them unimpeached, all of them absolutely uncontradicted—these witnesses being Mrs. Weitling, the widow of the inventor, Miss Toedt, her sister, Mr. Werner, the defendant, and Mr. Körbel, a disinterested person—that the Weitling machine was known to them and to many others, that it was put in use, tested and successful; that it was patented under an application originally filed eleven years before the complainant filed his application; that not only one of these machines was so made in this country but at least four more; that it was advertised for sale, inspected by many in view of such advertisement, that it was exhibited by the inventor to many persons and continuously used from the time of his invention to the time of his death the case is certainly brought within the test required by law as established in the case of Coffin vs. Ogden.

Whether or not therefore the machine had afterwards been actually abandoned, which in fact it was not, is utterly immaterial. If the machine is like King's in its essential characteristics it is clearly an anticipation of the same, on the authority of the decision in *Gaylor* vs. *Wilder*, 10 Howard, p. 498, where it was held as follows:

> "*The ommission of Conner to* TRY *his safe by proper tests would not deprive it of its priority; nor his omission to bring it into public use. He might have omitted both, and* ALSO ABANDONED ITS USE, *and been ignorant of the extent of its value; yet, if it was the same as complainant's, the latter would not be entitled to a patent; provided Conner's safe, and its mode of construction were still in the memory of Conner before they were recalled by Fitzgerald's patent.*"

But we may well inquire whether Weitling did abandon his invention. Did he forbear to apply for a patent in time? No! He did apply in 1855. Even had he forborne to apply during the progress of experiments and until he had perfected his invention and tested its value, that would not afford ground for presuming abandonment.

Agawam Co. vs. Jordan, 7 Wallace, page 583.

Abandonment has been defined in the case of *Kendall* vs. *Winsor*, 21 Howard, p. 329, to be either express declaration or conduct equally significant with language, such, for instance, as an acquiesence with full knowledge in the use of his invention. Did Weitling by express declaration or by his conduct show his intention to abandon his invention? Why, no, on the contrary! He made his application for a patent as soon as he had made the invention. He renewed it as soon as the law permitted it —even on his death bed. He used every imaginable effort, hindered as he was by his evident poverty to introduce the invention. He showed it, he explained it, he advertised it, he sent duplicates to foreign countries, he did all in his power, in fact, to make his idea a success, and now merely through failure as regards *success*, he is to be stamped as a mere experimenter. Is this a proper view to take? Do courts of equity apply the vulgar rule of measuring men by their success merely, or do they not take the higher standard and measure them by their acts and by the intention that guided them? The term "unsuccessful experiment" applies to the final lack of success of the invention with regard to the public. It attaches to the invention itself, that is to say, an experiment is unsuccessful as long as it does not reach complete embodiment. Success is the production of a complete article; when the article has been produced the success of the invention is completed. Immaterial it is whether subsequently the public takes the view of the inventor as to the value of his idea. What a poor figure James Watt would cut in the eye of the Court below had the first part of his life been subjected to our criticism; the same Court would have stamped his experiments and inventions as unsuccessful experiments simply because the people, at that time, did not regard the invention as valuable! What a poor inventor Fulton must have been! He gave us the steamboat, but did not make it a success while he lived. Was his invention the less successful or the less important for that? No. Abandonment can only be charged where there is a willful yielding of ones rights, a deliberate waiver and actual sufferance of the enjoyment of one's rights by others. None such can be *charged* against Weitling, none was *proved* and therefore the Court below erred in holding the embodiment of his invention, his trials, his efforts as mere unsuccessful experiments, and his acts, as proofs of his intention to abandon his invention.

By the portion of the act of July 8, 1870, above quoted, the question of abandonment was definitely placed in the hands of the Commissioner of Patents. He was made the Judge by law and he decided by the grant

of the Weitling Patent that Weitling had not abandoned his invention up to the time of the issue of his Patent, to wit: 1871. The Court cannot go behind the action of the Commissioner in such or analogous cases. This has frequently been held in cases relating to reissues of patents, unless fraud is charged which is not the case here. Not only did the Court below err in holding the Weitling invention to have been abandoned prior to 1867 [the date of King's Patent], but it improperly assumed a right in adjudicating on that question of abondonment which the law of 1870 contemplated to be definitely decided by the Commissioner of Patents.

The law does not favor abandonment which is in the nature of a forfeiture of a right and should be made out beyond all reasonable doubt.

Pitts vs. Hall, 2 *Blatchford, page* 238.

It is further submitted that a grievous wrong would be done by the Court to the present owners of Weitling's Patent by declaring his invention to have been abandoned as such a declaration would invalidate the patent held by them and would, in fact, in an action to which they are not a party and in which they have no opportunity to defend their property and their rights—deprive them of said property. It would be simply monstrous to deprive them of this patent in a collateral proceeding in which they are not represented.

Second: *The Weitling machine as used in* 1855 *and since, does fully and completely anticipate the King Patent, Reissue No.* 3000. It is like it in structure as regards the rollers and guide. (See answer of Renwick Question 4, page 192) also as regards its result (same answer, and answer 83, 84 and 85; page 237 and answer 91, page 238.) It was used with rollers having the characteristics of the King rollers, to wit: plain zones of lesser diameter, between two rows of fluting-rollers or fluted zones, which again are between two outer plain zones for compressing. It was used in combination with the Weitling bar, which has the arched projections for producing or creating the longitudinal continuous wave in the fabric, as it passes to the rollers. (See also in this connection Werner answer 3, pages 139 & 140 and answer 6 & 7, pages 140 & 141, also answer 40 & 41, page 158, and answers 171, 172 & 174 on page 177, and answer 199 on page 190.)

An effort was made by the complainant's expert Kittle in his rebutting examination to show that the Weitling machine differed from the King machine, in not having the arched guide *covered* as the King guide is covered; or made of two plates, with a space between them for the passage of the arched fabric; although it clearly appears from answer 49, page 86 of Kittle's testimony that he does not fully understand the machine, and that he so admits in the following words:

> "*I made some trimming on the Weitling machine; I have had*
> "*occasion to read a good deal more about it and examine descrip-*
> "*tions of its construction and operation, and what it has been*
> "*capable of producing at divers times, in the hands of skillful or*
> "*less skillful manipulators, so that I confess that my mind has*
> "*been a little bewildered in trying to find out what the plagued*
> "*thing might or might not do under given circumstances, and*
> "*under modified changes. And so, that in giving my answer I*
> "*may have wandered in my thoughts more or less.*"

Clearly these is no difference between the two machines of King and Weitling, except in the form of their guide, and this difference has been fully set at rest by a decision of Judge Blatchford on the same Patent

Reissue No. 3000, in a suit brought under it by one Kursheeth vs. Werner, reported 12, Blatchford, page 530.

It appears that in said suit Werner was charged with using a machine like Kings; and that he did use rollers like King's rollers; and in front of the same he had arched projections *which were not covered,* so that in every respect these projections were like the projections on the Weitling bar. The Court held in that case as follows: (12 Blatchford, p. 533 & 534.)

> "*The language of the specification and claim (of Reissue No. 3000), shows that the fact, that the part of the fabric which is not to be crinkled, passes* BETWEEN TWO PIECES OF METAL *on its way to the rollers,* IS IMMATERIAL TO THE INVENTION CLAIMED, *and that the fact, that the part of the fabric which is to be crinkled, has, at the time it passes over the arched part of the guide, a correspondingly arched piece of metal over it,* IS IMMATERIAL TO THE INVENTION CLAIMED. *Both of the pieces of metal on each side of the arched part of the guide, as well as the piece of metal above the arched part of the guide may be cut away, or removed without affecting the operation of the machine in the particular arrived at by the invention of the Patentee, as described and claimed in the specification, and without removing anything which is of the essence of his invention, or is necessary to its completeness as claimed. The language of the specification throughout, shows that the arched portion of the* LOWER *piece of metal* IS WHAT IS ALONE *effective in combination with the rollers, in producing the result of which the specification speaks.**** It also states that it is the curving* UPWARD *or* ARCHING *of the part of the guide which is in front of the plain portions of the rollers, which causes the width of the fabric, which is passed between such plain portions, to be greater if stretched out to its full extent than the width of such plain portions of the rollers, so that the fabric by means of its increased width will be crinkled or puffed in passing between such plain portions **** (p. 535). The expression in the claim — the guide constructed with a curved or arched portion — is the same thing as saying, the* CURVED OR ARCHED PORTION *of the guide.*"

The decision in question is accepted as giving an interpretation of King's Patent, which harmonizes entirely with the view of this Appellant, and it certainly clearly establishes the identity of the Weitling machine with the King machine. The guide of the Weitling machine also has the arched portion "*which alone is effective.*" It curves the material upwards or arches it to produce longitudinal continuous wave, or as the Court below expresses it the excess of material which is necessary to be introduced between the plain portions of the rollers for the production of the puffing. It has the *same* rollers as King's, and as to the guide it has that, which in a Court of competent jurisdiction has been pronounced to be the same guide as King's. If Werner cannot use the combination of the King rollers with an *uncovered* arched guide because he thereby infringes upon the King Patent, it necessarily follows that King's Patent is anticipated by proof of prior public use of a machine consisting of rollers like his rollers, and of an uncovered arched guide like his uncovered guide; for that which is covered by a patent will necessarily anticipate it. Therefore,

the error which the appellant claims is recorded in the opinion from which this appeal was taken, as regards the want of similarity of the Weitling machine and King machine is clearly established by the decision of the same Court in the case of Kursheedt vs. Werner above referred to, and the attention of the Supreme Court is therefore respectfully invited to said last mentioned decision.

In the opinion recorded on page 266 of the record, the Court below held that:

> "*The Weitling machine and apparatus, whether as originally* "*presented to the Patent Office or as existing and used before* "*King's invention, did not contain the combination of the claim* "*of Reissue No.* 3000."

It is claimed that this assertion does not correspond with the facts proved, and to which reference has already been made. The testimony of Mrs. Weitling, Miss Toedt, Mr. Körbel and Mr. Werner is absolutely uncontradicted. They prove that before 1864, to wit: as early as 1863, as regards Werner (answer 121, p. 171, answer 171, p. 177), and Körbel (answer 3, p. 178, 50, p. 182, 8 & 9, p. 179) and as early as 1855 as regards Miss Toedt (answer 6, 7, 8, page 124, 122, p. 132) and also as early as 1855 as regards Mrs. Weitling (answer 45, p. 123, 64, p. 144, 65—72, p. 145), a machine having rollers in every respect like the King rollers (Renwick answer 83—85, page 237) was used and exhibited by Weitling in connection with the Weitling bar, which is a bar containing protuberances or projections for arching the fabric upwards (Renwick 85, page 237), *and this combination is the combination claimed by King.*

Kursheedt vs. Werner 12, Blatchford, 534.

The proposition thus established, that the Weitling machine contains the same combination as the King machine, is further strengthened by the absolute proof furnished by the defense, as well as by the complainant, to the effect that the Weitling machine did and will produce identically the same configuration and kind of fabric as the King machine. Puffed trimming, like Exhibit Weitling No. 2, was produced on the Weitling machine in 1855 (Weitling answer 52, page 123,) and afterwards by several persons, (Weitling answer 55, page 143; answers 56 to 58, page 144; answers 214, 215, page 229; Toedt answers 28 to 31, pages 125 & 126; answers 117, 118, page 132; Körbel answers 17—19, page 180; answer 92, page 187; answer 97, page 188; answer 99, page 188.) And this trimming, Exhibit Weitling No. 2, is exactly like that, which King's machine produces.

Renwick answer 4, page 192, from which the following is quoted:

> "*The result upon the material subjected to the action of the said* "*Weitling combination is* IDENTICAL *with the result produced upon* "*the material by the operation of the said King combination.*"

Also, Renwick answer 12, page 202, which is as follows:

> "*Exhibit Weitling Puffing No.* 2 *is, in my opinion,* IN ALL "RESPECTS IDENTICAL *with the said patented puffing, both as an* "*article of manufacture and as presenting substantially the same* "*design.*"

Even Kittle, the complainant's expert, in answers 19—21, page 79, admits that Exhibit Weitling puffing No. 2 is like King's, and in answer 40, page 83, that the Weitling machine will produce a trimming, which would be like the trimming described in Reissue 3001.

Thus it is clearly established, not only that the Weitling machine is in every material respect like the King machine, but also, that it will produce, and did produce the identical result, which is aimed at by King's invention.

Third:—*The Robjohn Machine is an anticipation of King's Patent, Reissue No.* 3000. Robjohn's Patent No. 42,404 illustrates and describes a fluting machine, which consists of two fluting rollers having plain zones between the fluted zones, in combination with arched guides placed in line with the plain zones. Figure 10 of the drawing of Robjohn's patent illustrates an arched guide in every respect similar to King's arched guide, and the position of this guide with reference to the rollers is clearly illustrated by figures 1 and 2 of his patent. See also Werner answers 45 and 47, (page 159; answer 57, page 163 of the record) from which it appears that the office of the guides is to guide the material to the plain zones of the fluting rollers in Robjohn's machine. Guides like Exhibit S and T, which are also partly arched, were used in connection with such fluting rollers as are shown in Robjohn's Patent, as having broader or narrower smooth spaces between zones of fluting teeth previous to the year 1865, (Werner answer 60, page 163; answer 61 and answer 64, page 164. See also testimony of Müller, answer 8, page 185.) From Werner's answers Nos. 61 and 62, page 164, it clearly appears that the Robjohn combination is essentially like the King combination.—They are as follows:

"*Q.* 61. *State whether the fluting rollers in Exhibit Robjohn Machine were the only-shaped rollers the Exhibits* S *and* T *were used with; and if you know whether they were used with rollers shaped differently; please describe such rollers.*

"*Answer. The rollers were like those in Exhibit Robjohn Machine, except broader or smaller meshes and* BROADER OR SMALLER SPACES *were used. Finer or coarser fluting meshes. By spaces I mean the annular zones in the fluting rollers wherein the smoothers are placed for producing flat borders on the material which is passed through the rollers.*

"*Q.* 62. *State how the rollers were arranged with respect to each other, and the Exhibits* S *and* T, *which you call guides.*

"*Answer. The fluting rollers were placed one above the other, as in Exhibit Reissue* 3000, *and the guides were in the same position in front of the rollers, as in Exhibit Reissue* 3000."

Mr. Renwick, the expert, testifying about the Robjohn machine, says: (Answer 6, page 193.)

> "*I find that the Robjohn machine and guides, when combined,*
> "*as represented and described in the drawing of the Robjohn*
> "*Patent, contains a combination which is substantially the same*
> "*as the combination recited in the claim of Exhibit Reissue* 3000,
> "*in the following respects, to wit: each combination contains two*
> "*implements. In each of said combinations the said two imple-*
> "*ments are, first: a guide for operating upon a strip of material*
> "*before it passes to the fluting rollers, and, secondly: a pair of*
> "*fluting rollers for operating upon the material after it has*
> "*passed through the guide. In each of said combinations the*
> "*guide is composed of two pieces of sheet metal, secured one over*
> "*the other, at such a distance apart, as to permit the passage of*
> "*the cloth or fabric between them, and in each the* GUIDE IS

"CURVED OR ARCHED TRANSVERSELY, *so that the cloth or fabric* "*passes between the two pieces of the guide, and is caused to oc-* "*cupy less breadth horizontally than it did before it passed* "*through the guide. In each combination the fluting rollers have* "*two rings of fluting teeth, separated by an open space; the open* "*space of the fluting rollers of the Robjohn machine being* "*narrower than the open space between the rings of fluting teeth,* "*represented in the drawing of Patent Exhibit Reissue* 3000, "*which difference by itself, I should not regard as material, as* "*the breadth of the open space of the King rollers described in* "*King's Patent might obviously be made wider or narrower than* "*it is represented in the drawing, without changing the combina-* "*tion materially. In each combination the* CENTER OF THE GUIDE "IS ARRANGED OPPOSITE THE CENTER OF AN OPEN SPACE *between* "*rings of fluting teeth.*"

Renwick further finds that the Robjohn machine also shows pressers and strippers, substantially like the pressers and strippers shown in the King patent, and like those used by Werner; but he regards them as immaterial, as they do not constitute any part of the combination recited in the claim of the Exhibit Reissue 3000, which is a fact. Mr. Renwick finally gives it as his opinion, that if Reissue 3000 be assumed (page 194)

"*to include every combination, of first, an implement for guiding* "*the material to the fluting rollers, having surfaces, the one above* "*and the other below the material, and curved transversely, and* "*operating to cause the material to occupy less breadth horizont-* "*ally than it occupied before passing through said guide, and* "*secondly, a pair of fluting rollers, so combined with the guide* "*that portions of said material are fluted by being operated upon* "*by two rings of fluting teeth* AFTER THE MATERIAL HAS BEEN "CONTRACTED IN BREADTH; *then the said Robjohn combination is* "*included in said King combination, and is substantially the* "*same therewith.*"

Now it is true that the Robjohn machine, as arranged in the drawing, will not produce fluted *puffing;* but that it will produce fluted *trimming* having flattened strips between the rows of fluting, the flattening being produced by pressers, placed in the plain zones of the rollers, substantially like the pressers shown in the King patent; but, nevertheless, it requires merely a widening of the plain zone or an omission of the pressers of the Robjohn machine to produce a fluted puffing like the complainant's. The Robjohn machine will also produce the like effect if the guide be made somewhat narrower. But as King's patent does not confine itself to any particular kind of fluting rollers, but mentions in the description and claim: "suitable fluting rollers," it necessarily embraces the Robjohn rollers, which are rollers suitable for combination with an arched guide. The claim of Reissue No. 3000 states that the arched guide is combined with *suitable fluting rollers.* This means necessarily fluting rollers having a plain zone between two rows of fluting to receive the surplus material in such plain zones, which is produced by the arched guide. Whether or not the surplusage of material thus admitted to the plain zones is *afterwards* puffed or crinkled by the rollers, as in King's machine; or is pressed flat by pressers put against the plain zones, as in Robjohn's patent, is entirely immaterial as regards the character

of the patent itself. The patent does not cover the effect, only the combination specified.

It is a mere difference in degree, whether the one effect or the other be produced, the same as in a printing press, pictures can be printed in tints, or merely types in black; or as a sewing machine may be arranged to stitch in straight lines or in curves; to hem and bind fabrics or to sew them together; to sew embroidery on to fabrics; or to perform other functions different in kind without requiring an essential change in the structure of the machine itself. The difference between the various performances of a sewing machine is certainly much greater in many cases than that between the products of the Robjohn and King machines, and yet it is a difference resulting in no difference of construction of the machine. King's machine, if provided with pressers in its broad zones, would flatten the wave produced by the arched guide, and would nevertheless remain King's machine as patented. The essential thing invented by King, as he believed, was combining the arched guide with rollers which gear together to feed the fabric and to flute it, and which have open spaces between the gears of fluting teeth, and in line with the guide, so that the excess of fabric created by the guide may pass between the rollers *without being* affected by the rows of fluting teeth, and so that it *may be* puffed by the plain zones, as in the example shown by King. It has been fully shown by the proofs, that if in King's machine the plain zones are deepened to a greater extent than what they are shown to be, they will leave the wave of the cloth produced by the guide untouched and unruffled, in other words, if a machine made exactly like King's machine, with his same rollers and his same identical guide be used, so that the guide makes a wave of lesser height than the height of the space between the plain zones, the fabric will not be puffed, as the plain zones will not touch it. (Smaller or narrower guides have been used in place of Exhibits S and T. Mueller, answer 13, p. 185.) In such a case the fabric would come out of the machine partly fluted and partly waved transversely — the wave being perfectly straight, continuous and unruffled, and yet the machine would be like King's, and it would be an infringement of King's machine, provided King was the first inventor of such a machine. Therefore, it is immaterial whether or not the fabrics produced by the machines correspond, as long as the subject-matter claimed by King is like the subject-matter shown by Robjohn. That the Robjohn combination is like the King combination, has even been proved by the complainant's expert Kittle, in his answers to questions 99 to 101, page 99 of the record. The following are these questions and answers:

"*Q.* 99. *I want to know if the (Robjohn) guide is composed of two "pieces of sheet metal, secured one over the other at such a distance "apart as to permit the passage of the cloth or fabric between them?*"

"*A. Yes.*"

"*Q.* 100. *Now, would not the cloth or fabric passing between those "pieces of sheet metal, occupy less space horizontally than before it passed "through the guide?*"

"*A. Certainly; only about one half the breadth as stated.*"

"*Q.* 101. *Does not the combination of the guide with the Robjohn "machine, so far as the machine is concerned, consists of fluting rollers, "having two rings of fluting teeth, separated by an open space?*"

"*A. Yes.*"

He does admit the elements of the combination to be alike; it necessarily follows that the combination itself is also the same in both cases.

The same witness, Kittle, admits in answer to question No. 115, page 100 with reference to the guides S. & T., which as the proofs show were also frequently used prior to 1865 in combination with the Robjohn rollers (Werner's answers 59 and 60, page 163; answer 61 and 64, page 164) as follows:

"*Q.* 115. *I will now ask you whether the guides* S *and* T, *when used in combination with suitable fluting rollers, would not consist of, first, a guide to act upon the material before it entered the fluting rollers, and secondly, of a pair of fluting rollers to act upon the material after it passed through the guide?*"

"*Ans. Yes, sir, they would; supposing, as in the previous questions and answers the guides to be properly located and fixed in front of the fluting rollers so as to lead or guide the goods between the same.*"

The complainants own proofs therefore sustain the defendants proposition of the identity of the two machines in all essential respects. What difference there is between the Robjohn and the King machines is a mere difference of degree, but

> "*A change only in form, proportions or degree is not such an "invention as will sustain a patent.*"
>
> *Smith vs. Nichols,* 21 Wallace, p. 112. Reaffirmed in *Roberts vs. Ryer,* 1 Otto, p. 150.

If there is no material difference between Robjohn's guides and the King guides, then the only difference could be between the rollers of Robjohn and King rollers. But King does not confine himself to any specific rollers; he claims his guide in combination with suitable fluting rollers. Yet even if his patent be limited to the particular construction shown by him, the only difference between his invention and that of Robjohn would be in the configuration of the roller itself for the purpose of varying the design. Nor even would there be a difference in configuration, only a relatively wider smooth zone in one case than in the other. But such a change is not patentable.

Stimpson vs. Woodman, 10 *Wallace, p.* 117.

Fourth:—*The Mueller guide exhibit No.* 5, *as used in combination with the Mueller rings, exhibits* 3 *and* 4 *and others is a complete anticipation of complainants patent.* The witness Mueller testifies that he used the arched Mueller guide, Exhibit No. 5, in connection with fluting rollers like the Robjohn rollers, and like those on the Werner machine, and also in connection with fluting rollers having embossing projections and recesses on their plain zones as illustrated by the rings marked Exhibits 3 and 4. These rollers are called diamond embossing rings, but in their stead plain rings could be used and were used in 1862 and 1863 by said Mueller. (Answers 56 to 59, p. 223.)

The arched Mueller guide was used by Mueller on various kinds of rollers, but mostly on the diamond rollers all the time from 1863 to 1866. (Answer 7, p. 184; also answers 12, 13 and 14, p. 185.)

"*Q.* 14. (P. 185.) *Look at these two rings* (Exhibits 3 and 4) *and state what they were used for, and when they were used, and how they were used.*"

"*Answer. They were used in* 1863 *in a fluting machine, to make the diamond trimming I have described above. They were placed on the fluting rollers,* BETWEEN TWO RINGS WITH FLUTING MESHES, *one above the other, so as to fit in each other,* AND THEY WERE LOCATED OPPOSITE THE GUIDES."

(See also Mueller 34, p. 221; answer 24, p. 220; answer 15, p. 199; answer 41, p. 221; answer 51, p. 222; answer 17, p. 199.)

The witness Renwick testifies that the Mueller guide, Exhibit No. 2, which is a pasteboard model of the medal guide, Exhibit 5, is substantially identical with King's arched guide in all material respects. (Answer 8, p. 195, and answer 89, p. 238) and that if the same be used with fluting rollers, a machine like the King machine is produced. Answer 8, p. 196; answer 90, p. 238.)

"*Answer* 8, *p.* 195. "*Exhibit, Mueller No.* 2," *is a guide for fluting rollers which, in my opinion, is substantially identical with the said guide* E, *in all material respects; thus, it is composed, among other things, of two pieces of sheet metal, secured one over the other in such a manner, as to permit the passage of the cloth or fabric between them. The lower piece has a curved or arched portion secured to it, and* CURVED UPWARD OR ARCHED TRANSVERSELY, *so that the said piece and arched portion together constitute an equivalent in all essential particulars, for the lower arched plate of the guide* E, *when constructed with one curved portion.*"

"*Q.* 90, *p.* 238. *When the guide like Exhibits Mueller* 1, 2 *and* 5 *was used in connection with the fluting machine described by Mueller, were, or were not the fluting rollers particularly constructed and shaped with reference to the formation of, and for the purpose of producing in connection with the said guide a fluted trimming, having a central portion with a crinkled or puffed appearance?*"

"*Answer. There were.*"

This testimony and particularly Mueller's testimony as regards the facts referred to, is entirely uncontradicted and therefore requires no effort at investigation further than to compare the devices used by him with those patented by the complainant. The guide, Exhibit No. 5, which he used before 1862, is like King's arched guide. It is a *double* arched guide in every material respect, in fact, altogether like King's. It is so even admitted by complainants' witness Kittle. (Answer 2, lines 12 to 18, p. 75; also answer 109 to 111, p. 99)

He says:

"*Q.* 109. *Is the guide, No.* 5, *in your opinion in the nature of a guide to be used with fluting rollers?*"

"*Answer. Yes, it is.*"

"*Q.* 110. *And when so used, would it not lead the material to be fluted into the fluting rollers?*"

"*Answer. Yes.*"

"*Q.* 111. *And when so fed to the rollers, would not the arched portion of said guide, Exhibit Mueller No.* 5, *have a tendency to curve the material to be fluted, transversely thereon, so as to enter the rollers in a more fulled condition in the center of the material?*"

"*Answer. It would.*"

Kittle admits in answer 112, p. 100, that the Mueller guide in combination with fluting rollers like King's would perform the same function as the King guide does in the same combination producing even a puffed fabric. (See also his answer 114, p. 100, and answer 118, p. 101.) But this Mueller guide was mostly used with rollers which were like King's, having in addition embossing dies and recesses on their plain zones.

Would this addition make a difference in a patentable sense? The King rollers, and the King rollers *only* produce the puffed design by their contact with the longitudinal wave, which is made by the guide. Would the mere addition of projecting and receding figures of stars or diamonds to the King rollers avoid his patent simply because it changes the outline of the puffings to the more definite shape or outline of stars or of diamonds? Certainly not. Such an addition is a mere difference in *design* and not in structure. In the case of King vs. Mandelbaum, 8 Blatchford, p. 468, it was so decided to be an immaterial difference and the embossing rollers were held equivalents of King's rollers. In that case the complainants' patent, reissue No. 3000 was also involved as it is here. The defendant Mandelbaum in that suit used a machine which had fluting rollers like King's, but which was made without any arched guide. It contained however on the plain zones of the upper fluting roller a series of knobs or buttons which form a series circumferentially around the roller and have between each two of them a depression. On the lower roller, said machine had depressions matching the knobs of the upper roller.

This fact is clearly set out on page 472, 8th Blatchford, and there it was held, that even without *any* guide at all, the projecting knobs on the upper roller and corresponding depressions on the lower roller constituted the equivalent of the complainants arched guide. That Mandelbaum machine was certainly no more nor less than an embossing machine. The knobs or buttons on the upper roller might have been rounded and likewise the depressions in the lower roller rounded to emboss a fabric with rounded figures, more or less simular in shape to the puffed center of the King fluting.

In the Mueller rings equivalent knobs or buttons are used on the upper roller and corresponding depressions on the lower and therefore, under the analogous construction given in the case of King *vs.* Mandelbaum *the Mueller rings alone constitute the equivalent of the King guide and rollers.* Inasmuch as these embossing knobs alone would take up the surplus material without any additional guide, and would shape it in accordance with the desire of the maker of the machine, Judge Blatchford in the case of King *vs.* Mandelbaum held, that the defendant by placing the knobs or buttons on the rollers had

> "*merely changed the position of the guide; that the knob or button*
> "*operates in the same way as the plaintiff's arched guide to pro-*
> "*duce, in combination with the rollers, the same result that the*
> "*plaintiff produces. In the puffing or trimming produced by the*
> "*defendant's machine, the material which passes over the knobs is*
> "*crinkled by the operation, and the two machines produce puffings*
> "*which are substantially identical in appearance and structure.*
> "*The fact that the defendant does not continue his arched eleva-*
> "*tion unbroken around the circumference of the roller, but breaks*
> "*it by depressions, makes no difference. Where the knobs are,*
> "*there he avails himself of the plaintiff's invention.*"

Now, although it may be still doubted that, simply because the two machines produced the same fabric, they are necessarily alike in principle, it must nevertheless be admitted that if the decision in the case of King *vs.* Mandelbaum is correct, the Mueller rings with the diamond projections and depressions are also equivalents of the plaintiffs machine inasmuch as these knobs or projections on the Mueller rings will also take up the additional amount of material required for producing the puffed or embossed design. If, however, the decision in the case of King

vs. Mandelbaum is not correct—if the addition or omission to or from the King rollers of the embossing knobs and depressions is immaterial and a mere change of design, then, and in that case, the Mueller rollers und rings are *like* the King rollers in principle and in effect and their combination with the arched guide Mueller No. 5 produces necessarily the identical combination, as that which is described in complainants patent. Therefore whether we take the decision in the case of King *vs.* Mandelbaum as correct or as incorrect, it alone *proves* and establishes the fact that the complainants device is fully anticipated by the prior use of Mueller's guides and rings.

As to Mueller guide No. 5, the opinion of the Court below, from which this appeal is taken, holds as follows:

> "*The Mueller guide No.* 5, *with the arched projections, has*
> "*not two surfaces between which the material passes.*"

Now, this, in the first place, is not a true statement of fact as in point of fact the arched Mueller guide *has* two surfaces between which the material passes, the upper surface being flat, and the lower, arched. But the flat upper portion is so combined with the lower arched portion, that it bears the material upon said arched portion and compels it to curve transversely thereon.

This was clearly shown by the witness Renwick in his answer to question 8, second paragraph, page 195. Nor is it material whether the arched guide is covered or not, as Judge Blatchford himself has held in the case of Kursheedt *vs.* Werner, 12th Blatchford, page 534, that it is entirely immaterial whether the arched piece of the guide is covered or not and that the arched portion of the lower piece of metal is, what is *alone* effective.

The next objection raised by the Court below against the Mueller machine, is that the Mueller guide No. 5 was always used:

> "*with the rings Nos.* 3 *and* 4, *which were diamond embossing*
> "*rings, and made a diamond figure on the material, and occupied*
> "*all the space not occupied by the fluting rollers, and that, there-*
> "*fore, it does not present the combination set forth in the claim of*
> "*Reissue No.* 3000."

As to this it may be replied that the claim of the reissue specifically mentions "*suitable*" fluting rollers, that the Mueller rings *are* such suitable fluting rollers, that the combination which the arched guide effects in conjunction with them, is identically the same as that effected by the combination shown in King's patent, and that as regards the attachment of the embossing figures to the plain zones of the rollers, such attachment leaves the combination unchanged, as has already been shown.

Fifth:—*In view of the prior state of the art and of the machines formerly in use, and of prior patents, the machine shown and described and claimed in reissue No.* 3000, *was not a new and orginal invention.*

Under this heading it is merely necessary to reconsider the matters referred to under the first four points of this brief. We have, it seems conclusively shown that the Weitling machine and the Robjohn machine and the Mueller machine were, in all essential respects, like the King machine. It is true, that in the King rollers outside of the fluted zones, there are narrower flat zones combined with pressers for forming flat portions on the strip of fabric; but this combination is not claimed, nor is it in fact, new. The Robjohn machine shows the same flat zones combined with the same pressers. The testimony shows the two machines to be alike in these two respests. The Weitling machine shows the same outer plain zones

so placed, with reference to their respective diameters that they *compress* the strip in proper manner without the use of the pressers, and they are therefore like Kings; but this is immaterial, because, as already stated, the King reissue does not claim the combination with the pressers; and as therefore the same is necessarily disclaimed. For it has been held in the case of the Cornplanter patent, 23 Wallace, page 181, that a patentee by his claim as to what he regards as new, disclaims by necessary implication the rest as old. And such remaining parts ought to be regarded as old, or common and public.

King, in securing his original patent, intended to claim as new the construction of his rollers. But (as was shown by our quotation from his File wrapper), he was convinced by the patent office that it was old, and he therefore promptly withdrew that claim and confined himself to the claim for the arched guide combined with *suitable* fluting rollers for the purpose specified.

The purpose specified was to combine with fluting rollers having plain zones between rows of fluting teeth, a guide of arched form, which would contract the material laterally, so as to pass it in the contracted form between the rollers, into the spaces occupied by the plain zones. This it was his intention to claim, and to secure by the patent, and this it is, what his patent covers. If in this regard his machine had been anticipated, the whole patent is invalid. A mere change in the form of the rollers or in the form of the guide, would be an invasion of the patent if valid, and it would also be an anticipation thereof if prior use were proved.

It is here submitted that such prior use has been amply proved; that the rollers were old was not only demonstrated by the Weitling machine, but was so held by the commissioner of Patents in rejecting King's second claim, and was accepted as a correct judgment by King himself when he withdrew that second claim. That the guide was old is clearly demonstrated by the Weitling bar, by the Robjohn guides, by the guides S. and T. and by the Mueller guides Nos. 2 and 5. That the combination of these guides with such rollers is old was finally demonstrated by the Weitling machine, as used in connection with the Weitling bar, by the Robjohn machine, by the Robjohn patent and by the Mueller machine and Mueller guides.

The mere omission of the embossing attachment from the Mueller rings produces only a difference in design. If the Mueller rings instead of diamond-shaped knobs and depressions had rounded knobs and depressions, there would not even be a difference in design produced; and if to the King machine were attached either rounded or diamond-shaped projections such change would not depart from the essence of King's invention, as it has been held (in the case of King *vs.* Mandelbaum) not to amount to a departure therefrom, but only to a modification of structure. Therefore the King machine contains nothing that was not already fully known and in public use prior to King's alleged invention. If it be said that the peculiarity of the King machine consists in, that the guide produces the longitudinal continuous wave in the fabric and that the plain zones of the rollers afterwards so act upon such wave, by slight pressure, as to transform it into more or less irregular puffings, then in that case the Weitling machine is a full anticipation of King's patent, for in that machine the bar having the protuberances also produces the longitudinal continuous wave in the fabric and the rollers afterwards, by their plain zones, so act upon such wave by slight pressure as to transform it into irregular crinkles or puffings in the manner shown in exhibit Weitling No.

2, which exhibit has been shown to be identically like the fabric produced by complainants machine.

The complainants expert, Kittle, admits in his answer 15, page 78, that the Weitling machine will produce a fluting with puffed centre and that the same would be like Exhibit Pipo Puffing (answer 16, page 78), which Exhibit Judge Blatchford in his opinion page 265 of the record states to be like the puffing produced on complainants machine and which caused him to declare Reissue No. 3001 to be invalid, owing to the prior production of the said Pipo Puffing on a sewing machine.

This reference to the Pipo Puffing also shows that King was not the first to produce more, than at best a certain *particular* combination of parts for shaping a fabric which previously had already been shaped into the same form by a different and other combination of parts. His claim therefore to his machine cannot be construed to cover *every* means for producing such puffing or result, but only to cover the special means invented by him for doing that, which others had already previously done by other means and on this ground the broad construction which has been given to his patent in the decision referred to, is not justified. Fuller *vs.* Yentzer, 4 Otto, p. 296 & 297. The patentee of an improvement in Sewing Machines is entitled only to his specific combination, if inventors of other sewing machines by different combinations had already previously arrived at the same result. Whether or not the claim would receive a more liberal construction in the case of a patentee who was the first inventor of such an organized machine, is a question which need not here be considered. But in view of the fact, that King's machine is not confined to particular fluting rollers, only to a particular guide, the previous combination of that same guide with substantially the same fluting rollers and of substantially the same guide with the same rollers must necessarily invalidate his patent.

Sixth:—*The Werner machine is not like the King machine and does not infringe upon King's Patent, nor is the Werner Detent an equivalent of the King arched guide.*

> " *That the two machines produce the same effect will not justify*
> " *the assertion, that they are substantially the same, or that the*
> " *devices used by one are therefore mere equivalents for those of*
> " *the others.*"
>
> *Burr vs. Duryee*, 1 Wallace, p. 572.
>
> " *An infringement involves substantial identity*" *Ibid.*
>
> " *The argument used, to show an infringement, assumes that*
> " *every combination of devices in a machine, which is used to pro-*
> " *duce the same* EFFECT, *is necessarily an equivalent for any other*
> " *combination used for the same purpose.* THIS IS A FLAGRANT
> " ABUSE OF THE TERM " EQUIVALENT."—*Ibid, p.* 573."

We have already and fully shown, and the Court below in this same case has held, that King was not the first inventor of a machine for making the fluted puffing which is produced on his machine. The same puffing the Court below found to have been previously produced by Pipo, and the witness Pipo clearly proves that he produced it on a sewing machine (Answer 53, page 108.) He describes the attachment which he applied to the Wilcox & Gibbs sewing machine (answers 54 to 60, pages 108 and 109,) and that he made it in 1860 (answer 52). The machines for doing this were invented by Pipo (answer 63, page 109). At that time he already saw the same kind of puffing made on the fluting machines (answer 71, page 110). In fact, the goods are so much alike, whether produced

on the sewing machine or on a fluting machine, that he was unable to tell from the fabric whether it was made on the one kind of machine or on the other (answer 79, page 111). A guide, *a covered guide*, was used on the sewing machine to produce this fluted puffing (answer 85, page 111). Therefore it is clear, that King's invention is a mere variation of other machines already known for producing that, which was already produced on such other machines. The decision in the case of McCormick vs. Talcott, 20 Howard, p. 403, applies, therefore, to the construction to be given to King's Patent and its claim. In that decision it was held that (p. 405):

> "*If the invention claimed be itself but an improvement on a known machine, by a mere change of form or combination of parts, the patentee cannot treat another as an infringer, who has improved the original machine by use of a different form or combination, performing the same function. The inventor of the first improvement cannot invoke the doctrine of equivalents to suppress all other improvements which are not colorable invasions of the first.*"

So also in Burr vs. Duryee, 1 Wallace p. 574, it was held as follows:

> "*Every man has a right to make an improvement in a machine and evade a previous patent, provided he does not invade the rights of the patentee.*"

In the same case as well as in O'Reilly vs. Morse, 15 Howard, p. 112, it was held that a patent cannot be for an abstraction.

Now the Werner machine employs a detent for holding back the fabric so as to draw it into V-shaped corrugations. The detent does not guide the fabric, and the Werner machine has no guide. The fabric is solely guided by hand in the proper direction to the rollers, (Werner, answer 25, page 150, as corrected after answer 64, p. 164). In the King machine the rollers have nothing to do but to flute the fabric and to press its wave into the crinkles or puffings. In the Werner machine they have to overcome the resistance of the detent so as to enable the *detent* to produce the corrugations or crinkles. The detent does not and cannot guide the fabric, it does not and cannot give direction to it, as it does not change the direction in which the fabric travels, nor does said detent form a continuous longitudinal wave in the fabric, nor does it, in fact, raise the fabric in a straight line off the platform, nor is it arched transversely, all of which is done by, or a characteristic of, the King guide. The detent, therefore, performs a different function from that of the arched guide. It performs the function of forming the corrugations, which in the King machine is performed by the rollers themselves.

The rollers of the Werner machine do not in the least affect the corrugations which are produced by the spring. In the King machine the rollers do affect and necessarily affect the continuous, longitudinal wave of the fabric, so as to form the puffings. No such function is performed by the Werner rollers simply because their combination with the spring detent is a different combination from that invented by King.

The testimony of the complainant at no place and in not a single instance proves the detent of Werner to be equivalent to the arched guide of King. On the contrary, the expert Kittle shows that if the arched guide is not to be used, a different mechanism must be *invented* and the defendants clearly show by the testimony of Mr. Renwick who most emphatically asserts that the Werner detent is not the equivalent nor even

a substitute for King's arched guide (answer 10, page 198, second Paragraph, answer 100, page 239 and answer 101, page 240). It is different in construction, different in effect—it is a *new invention*. Equivalents are only such devices as were already known to be such at the time when the patent was granted to the complainant. The spring used by Werner was not known to be an equivalent of the arched guide, nor is it an equivalent. The act of the Commissioner of Patents in granting to Werner his patent for the machine in question (Exhibit Werner Patent, page 233) is conclusive evidence of the fact that the machines differ. This act of the Commissioner of Patents is more significant in view of the very broad claims which he granted to Werner, to wit: the first and second claims of his patent which were granted, as the File wrapper of Werner's application shows, without any objection on the part of the Patent Office. Said File wrapper, as reproduced on page 242 of the record, shows that the application of Werner was received in the Patent Office, November 9, 1872, that it was examined December 28, 1872, and that the patent was immediately ordered to issue, to wit: December 28, 1872.

Previous to this time Werner filed a caveat for his invention which is also in evidence as Werner caveat and which shows and describes the same machine.

Werner as a witness in his own behalf shows that he is the original inventor of his device embodied in his machine, that his spring is not a guide, that on his machine the V shaped corrugations can be made by the *detent alone* without the rollers (answer 23 and 24, page 149).

Now if the King guide could also make the lateral corrugations *without rollers*, the two devices might be held to be at least similar; but if the fabric be drawn only over the guide of King's machine, it will not assume the crinkled or corrugated shape which is imparted to it by the detent of Werner's machine. Therefore, the devices differ not only in construction bnt also in effect, for the Werner *fabric* is different from the King *fabric*. King's machine with its arched guide could not produce Werner's fabric with its V shaped crincles or corrugations (answer 27 and 28, page 156), nor could King's fabric be produced with the Werner machine; nor would it follow, that even admitting that the result of both machines is similar, the two machines are alike. Renwick, answer 10, p. 200. Burr *vs.* Duryee, 1 Wallace, p. 573. Werner's fabric was also the subject of a separate design patent granted to him in 1870 and in evidence in this case, and the grant of this Patent is further proof that the Patent Office considered it a fabric different in design from that produced by King.

All these matters taken in connection show that:

First:—King cannot invoke the doctrine of equivalents to suppress all other improvements on machines for making puffing like the Pipo Puffing (McCormick *vs.* Talcott, 20 Howard, page 405), because he was not the first to produce that style of fabric.

Second:—That the two devices are not equivalents, because they are different in construction, in arrangement and in effect, and

Third:—That the Werner combination, being newly invented after the grant of the King patent, cannot possibly be covered by the King patent for

"A combination is not infringed unless by a machine containing all the "material ingredients patented, or proper substitutes for one or more such "ingredients *well known to be such at the time when the patent was granted.*"

Seymour vs. Osborn, 11 *Wallace, p.* 516.

King being the patentee of the combination cannot suppress subsequent improvements which are substantially different and which perform new

functions not known at the date of the first patent as, and which are not proper substitutes for the ingredients withdrawn from his patented combination, for although the patentee is in all cases entitled to invoke to some extent the doctrine of equivalents, he is never entitled to do so to suppress all other substantial improvements. And as the defendant, in constructing his machine, omits entirely one of the ingredients of the plaintiffs combination, even although he substitutes another in the place of the one omitted, which is new or which performs a substantially different function, or which even if old was not known at the date of the plaintiffs invention as a proper substitute for the omitted ingredients, he does not infringe. No pretension has been made that the detent of Werner was known as a proper substitute for the transversely arched guide of King at the time of King's invention. It is shown by the grant of the Werner Patent to have been a new and a useful invention. The fact that this suit was brought against Werner proves the popularity and utility of his machine, for otherwise the complainant would not have deemed it of sufficient importance to bring suit against him The utility of Werner's device is, therefore, admitted. It is different from the King device, as has been proved and not in any way disproved, not even in complainant's rebutting testimony. Nay, the complainant's expert, Kittte, admits in answer 64, page 89, that not every guide is equivalent to the guide E of complainants Patent, and in answer 65, page 89 he admits, that the object of the guide and the principal object of the guide of King's machine is to give direction to the fabric. Therefore, only such a device, if any, would be an equivalent of the King device, which would act as a guide to give direction to the fabric, and as Werner's detent does not act as such a guide and as furthermore Werner has no guide whatever, but the hand of the operator, it follows from the showing of complainant's own expert, that the two devices are not equivalent. As to the effect of the newly invented combination upon a patent covering a specific combination, the following decisions are respectfully referred to:

Seymour *vs.* Osborne, 11 Wallace, p. 556.

> "*The patentee of a combination cannot suppress subsequent improvements which are substantially different, whether the new improvements consist in a new combination of the same ingredients, or of the substitution of some newly-discovered ingredient, or of some old one performing some new function, not known at the date of the first patent, as a proper substitute for the ingredient withdrawn from the combination, constituting the invention. Patentees, therefore, are entitled in all cases to invoke, to some extent, the doctrine of equivalents, but they are never entitled to do so in any case, to suppress all other substantial improvements, and the rule which disallows such pretentions, if properly understood and limited, is as applicable to the inventor of a device, or even of an entire machine, as to the inventor of a mere combination, except that the inventor of the latter cannot treat any one as an infringer, whose machine does not contain all of the material ingredients of the prior combination, as in that state of the case the subsequent invention is regarded as substantially different from the former one, unless the latter machine employs as a substitute for the ingredient left out to perform the same function, some other ingredient, which was well known as a proper substitute for the same when the former invention was patented.*"

Johnson vs. Root, 2 Clifford, 123.
Gould vs. Rees, 15 Wallace, p. 194:

> "*Where the defendant, in constructing his machine, omits entirely one of the ingredients of the plaintiff's combination, without substituting any other, he does not infringe, and if he substitutes another in the place of the one omitted, which is new, or which performs a substantially different function, or, if old, was not known at the date of the plaintiff's invention as a proper substitute for the omitted ingredient, then he does not infringe.*" *Cawer vs. Hyde*, 16 Peters, 514; *Vance vs. Campbell*, 1 Black, 427; *Roberts vs. Harnden*, 2 Clifford, 504; *Mabie vs. Haskell*, Ibid, 511; *Brooks vs. Fiske*, 15 Howard, 219; *Stimpson vs. Railroad*, 10 Ibid, 329; *Prouty vs. Ruggles*, 16 Peters, 341; *Barrett vs. Hall*, 1 Mason, 477; *Howe vs. Abbott*, 2 Story, 194.

The doctrine laid down in Gould vs. Rees, was reaffirmed in Gill vs. Wells, 22 Wallace, pp. 28, 29, and also in Fuller vs. Yentzer, 4 Otto, p. 297.

Respectfully submitted by

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Attorney for Appellant.

NEW YORK, *October* 12, 1877.

Supreme Court of the United States.

ROBERT WERNER,

Defendant and Appellant,

vs.

GEORGE E. KING,

Complainant and Appellee.

No. 94.

BRIEF ON BEHALF OF APPELLEE.

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1877.

BENJ. H. TYRREL, LAW PRINTER, 74 MAIDEN LANE.

Supreme Court,

OF THE UNITED STATES.

ROBERT WERNER,
Appellant.
vs.
GEORGE E. KING,
Respondent.

No. 94.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK.

STATEMENT AND BRIEF ON BEHALF OF THE RESPONDENT.

This cause was commenced by a bill on the equity side of the circuit side of the circuit court, for the Southern District of New York, charging the defendant, Robert Werner, with the infringement of letters patent of the complainant, George E. King.

The original patent of the complainant was dated February 26, 1867, and was reissued in two divisions on the 23d day of June, 1868, Nos. 3,000 and 3,001.

Reissue No. 3,000, being for a machine for the manufacture of fluted puffing, and No. 3,001 being

for the product or article of fluted puffing, made by the machine.

The bill alleged the infringement of both of said reissues by the defendant Werner, and prayed an injunction and account.

The answer of defendant put in issue the validity of both reissues, and denied infringement. The validity of the reissue, No. 3,000 (for the machine) was attacked for want of novelty, a number of persons being cited as having had prior knowledge or use of the invention. Reissue No. 3,001 (for the product) was attacked for want of novelty, and because it was not a patentable subject.

Replication was filed and proofs taken in support of the issues.

Upon the hearing the Circuit Court decided that reissue No. 3,000 (for the machine) was valid, and had been infringed by the defendant.

The Court further held, that reissue No. 3,001 was invalid for lack of novelty.

A decree was accordingly entered for the complainant, adjudging reissue Letters Patent 3,000 valid, and giving judgment against the defendant for nominal damages (as had been agreed by stipulation) and the costs.

From this decree the defendant appealed.

The complainant did not appeal from the decree; hence, the only question to be now considered is, whether the judgment of the Circuit Court was correct in decreeing the reissue No. 3,000 valid, and in decreeing infringement of it by the defendant.

No appeal having been taken from so much of the judgment of the Court, as declared reissue 3,001 (for the product) invalid, all of the testimony re-

lating to the question of novelty, or other questions relating solely to the product, needs no consideration.

POINTS ON BEHALF OF THE RESPONDENT

This cause will be treated under the following heads, in support of the decree of the Circuit Court.

We shall show that the decree of the Circuit Court, in sustaining reissue No. 3,000, and decreeing the defendant to infringe the same, to be correct by considerating—

1. The construction of the complainant's patent.
2. The issue of novelty.
3. The question of infringement.

FIRST POINT—Complainant's patent is a patent for a combination of mechanical elements arranged so as to co-operate together to produce a certain defined result.

The invention described and claimed in reissue No. 3,000, is stated to be "an improvement in fluting machines." The specification says, "This "invention is designed for making puffing applica- "ble to shirt bosoms, trimming or other purposes "of dress, in which the article, as it issues from "the machine, is without having recourse to "laundering, delivered in a complete form, either "singly, or in two or more series of rows, com- "posed of flattened borders, with flutes running "along their inner edges, and puffing or crinkled "surfaces between the flutes." It appears, therefore, that this machine is one designed to produce, automatically, and without recourse to laundering, a peculiar form of fluted puffing.

It is well known that all fabrics to be "fluted" are starched or sized, and in the moistured state are passed between the rollers of a fluting machine which are *heated*. The fabric is dried and stiffened in the process, and assumes definitly the pattern on the rollers. To make "*puffing*" however very different means had to be resorted to. Prior to this invention, puffing in connection with fluting had been made by subjecting the fabric after it had been fluted to washing or laundering, in those parts desired to be puffed. By this washing process the regularity of the flutes was destroyed, and the material assumed a more irregular, crinkled, or puffed appearance. A particular form of fluted puffing is shown in a prior patent of the complainant, dated October 23, 1866, No. 59,036.

This patent exhibits a puffing, having its puffed or crinkled surface made by laundering, and not by the operation of the machine to which the fabric was subjected.

It was obviously the object of the present invention to do away with laundering as a separate process, and to create a fabric, having flat borders which should serve as a margin, through which stitches should hold the flutes and puffing in place, within these borders having the characteristics of *fluting*, with its ridges of street regularity, while its centre possessed the more *full*, irregular, and wavy appearance of puffing.

To produce this result a combination of mechanism was necessary. It was necessary to modify an ordinary fluting machine, so that the fluted or set figure produced by the rollers in the machine would not be carried entirely across the fabric subjected to it; and it was necessary to combine with such fluting machine some mechanism for throwing into the portion of the fabric to be puffed a greater fullness of material than was found in the other portions of the fabric.

The inventor accordingly states, "the invention "consists in a guide constructed with one or more "curved or arched, portions in combination with "one or more suitable fluting rollers, whereby the "material in passing through the machine is fluted "and contracted latterly, as it were, or drawn up "between the flutes to produce the required crink-"led surface or surfaces in the puffing."

The several parts of the machine are then particularly described with reference to the figures, but reference is only necessary to the particular description of those portions of the machine which co-operate together to form the puffed portion of the fluting. The rollers of the machine have *flat* or *plain* portions at the sides for the flattened borders, and between these, so far as they form the fluted sections on the fabric they are the same as ordinary fluting machines. But with reference to those portions which co-operate to form the puffed sections of the fabric, the specification states as follows:

"In order to form these several portions of the "puffing, each of the fluting rollers, B C, is "formed with as many annular or circumferential "series A^1 of grooves and flutes as there are fluted "portions, g, upon the puffing, with as many nar-"row annular faces, B^1, as there are flattened por-"tions *h*, and *with as many comparatively broad "portions* C^1, *as there are puffed portions in the "finished puffing.*"

Again, "Fixed upon the forward side of the "frame A, in front of the roller B, is a horizontal "supporting brace *m* which is fixed upon it, and "inclined plate *n*, upon which is supported the in-"clined guide E, which is composed of two pieces "of sheet metal secured one over the other, at such "a distance apart as to permit the passage of the "cloth or fabric between them; and those parts of "this guide E *in front of the plain cylindrical "portions* C, *of the rollers* are curved upward, or

"arched transversely as shown at a, *in such man-*
"*ner that the width of the fabric passed between*
"*each pair of the plain portions* C[1] *will be greater*
"*if stretched at its full extent than the width of*
"*the said portions, so that the said fabric, by*
"*means of its increased width will be crinkled or*
"*puffed in passing between the aforesaid portions*
"C."

Thus is formed the *loose fullness*, requisite for *puffing*.

Again, in speaking of the operation of the machine, and its action upon the fabric passed through it, the inventor says: "Those portions of the "fabric drawn through the curved or arched parts "a[1], of the guide E *being, if stretched to their full* "*extent of a width greater than that of the smooth* "*cylindrical portions* C[1], and being also gathered "by the fluting formed at their sides or edges, are "caused to assume a crinkled or puffed form, as "they are passed between the aforesaid portions "C[1]. The distance between the opposite smooth "portions C[1] aforesaid, being such that *no pressure* "*is exerted upon the fabric passing between them*, "beyond that required to simply press the convex "surfaces thereof, downward to a sufficient degree "to insure the shape thereof into a puffed condi-"tion just herein described."

The inventer further states, "the extent to which "the material will be thus *contracted latterly*, as it "were, or *drawn up between the flutes* will be gov-"erned by the excess of the length of the arched "portions a^1 of the guide over a straight line or "lines connecting such arched portions at their "base.

"By this means the fluted puffing is brought into "the form required in the finished article *without* "*the necessity of washing the same in order to* "*bring the puffing into such form*."

The inventor then makes claim as follows: "The "guide E constructed with one or more curved or "arched portions a^1 in combination with suitable "fluting rollers *substantially as herein set forth* "*for the purpose specified*."

It is very obvious from this specification that this patent is not a claim for a combination of every or any guide with every or any form of fluting rollers, but for the combination of a guide adapted to produce a particular result with fluting rollers, so formed and arranged in connection with said guide, that they will co-operate to produce said result.

The function of the guide is to operate on the fabric designed to be fluted and puffed, and to draw into the center a greater portion of the fabric than would be passed through a straight guide in the same position, and the object of the rollers is to flatten the edges, to prepare them for stiching, and to flute the adjoining portion of such fabric, while their construction is such that the excess of fullness produced by the guide will be thrown into a space between flat and unfluted portions of the rollers, and then, not pressed, but merely held in its full condition, and prevented from expanding to a plain surface, thus causing it to assume its puffed appearance.

It is only by such a combination as this that the result desired will be produced; hence, the claim is manifestly for the combination of two elements, (1) the guide E or its equivalent, for drawing in the required fullness of fabric, and presenting it in a full condition to the rollers; (2) the rollers with flutes and flat portions on their edges, and with an unfluted and plain portion or open space between them, such flat portion of the rollers or open space being arranged opposite to the guide, for throwing in the fullness.

It is only on this specific combination that the claim is made. It is only this specific combination

that accomplishes the object aimed at. It is only this specific combination which is claimed to be infringed.

The appellant's counsel contends, with obvious motive, that the claim is not for the combination of the guide, with the rollers described, but only with "suitable" rollers, which he seems to understand to mean the same as "any" rollers. But this is a plain misinterpretation. "Suitable" rollers, means "suitable to produce the required result;" and when we ask how are they constructed so as to be "suitable," the answer is found in the full and specific description in the patent.

SECOND POINT.—The complainant's patent is not affected by the proof adduced on the part of the defendant relating to prior machines. All such machines were substantially different in construction from that of the complainant, or were mere experiments, useless and abandoned.

Three of the alleged prior machines are introduced as bearing upon the question of novelty of the King machine.

1. The Robjohn Machine.
2. The Weitling Machine.
3. The Muller Guides and Rings.

1.—The Robjohn Machine.

This is illustrated by the Exhibit Robjohn patent, Exhibit Robjohn machines, the Exhibit Robjohn guides. Other guides used in connection with said machine are marked S and T.

Being similar in construction, all will be considered together.

The Robjohn machine contains neither of the elements of the combination patented by the complain-

ant. It does not contain a guide for throwing in a greater fullness of material between the fluting rollers, nor does it contain an arrangement of fluting rollers constructed with flat portions, or an open space between them in such relation to the guide that the increased fullness of the fabric, produced by the guide is thrown into the flat portion between the rollers. On the contrary, the Robjohn patent shows ordinary fluting rollers, having narrow grooves in them, and a guide arranged opposite the grooves, of such a shape that the fabric passed through it is *not* delivered in a full state so as to be puffed, but is doubled and flattened and delivered in the doubled and flattened state between the rollers. The grooved portions of the rollers are also provided with pressers, which necessarily keep the piece of material which is passed into them flat. The guide which is combined with these rollers is not one which guides the *whole* fabric, as in the plaintiff's machine, but it is a small guide which guides *a separate* piece of fabric, and delivers it in a folded state between the rollers.

Obviously, no such result is produced as in the plaintiff's machine, and this is due to the fact that the combination of machinery is different. This is admitted by the learned expert for the defendants.

Mr. Edward S. Renwick, in speaking of the Robjohn machine, and comparing it with reissue 3,000, says (p. 193, f. 401): "*The two combinations are* "*substantially different* in the following respects, "viz.: The guide of exhibit reissue 3,060, which I "will call the 'King guide,' is curved or arched "throughout its entire length in the direction in "which the material passes through it, while the "guides described in the Robjohn patent are grad-"ually flattened, so that the material, although "made to occupy less breadth horizontally, is "*flattened* before entering the fluting rollers, while "the material passing through the 'King guide'

"leaves it in an arched or curved form transversely. "The two combinations differ also in the respect "that the fluting rollers of exhibit reissue 3,000 "have two small zones or rings at the side of their "fluting teeth in such a position relatively to the "guide that the material, after passing through "the guide, is caused to pass through the said "smooth zones, whereas, in the Robjohn combina- "tion there are no smooth rings in the same posi- "tion relatively to the guide.

The learned expert then goes on to say that if the re-issue 3000 "be assumed to include *every* combination" of an implement for guiding the material to the fluting rollers curved transversely, and a pair of fluting rollers (a construction which no one has ever contended for, which the Court did not adopt, and which as we have seen is obviously incorrect), then the Robjohn combination would be the same, *otherwise not*.

The expert for the complainant puts the difference between the machines in a very clear light. After describing the Robjohn machine, (p. 73, fol. 163), he says, "the improvements "illustrated and described by Robjohn, do not "embody the construction, nor arrangement, nor "combination described and illustrated in the "exhibit re-issue 3000."

"In the first place, the fluting rollers are not "provided with an outer plain band, having a "regular row or band of fluted meshes ad- "joining and within which, in turn, there is a "broad zone or plain space which is bounded "by another regular row of fluted meshes having "beyond it a plain band."

And again: "The purpose and construction, and "arrangment of the part of exhibit 'Robjohn mach- "ine,' as illustrated and described in exhibit 'Rob- "john patent' is to manufactare double fold ruffles "two at a time. There is no provision in the

"machine or guide, so called, for taking in the "breadth of the material in its cross section, nor "is there any provis'on in the construction or "description for affording a puffed or irregular "waved center in goods to be operated upon "in said machine, much less any pro- "vision for producing an article of manufacture "characterized by flattened borders on its outer "edges, adapted to be stitched by sewing machine "or otherwise, with regular rows of fluting within "said borders, separated by a zone or space of ir- "regular waved or crinkled surface. Neither is "there found in said Exhibit 'Robjohn machines,' "'Exhibit Robjohn guides' nor 'Exhibit Robjohn "patent' any arched guide, the purpose and office "of which is to guide and control a strip of muslin "or other goods, to be operated upon by the "machine, so as to lead and guide a proper amount "of goods in breadth to form two flattened borders, "two regular rows of fluting within the flattened "borders and the surplus between said borders and "rows of fluting, more than equal to a plain zone "which separates the rows of fluting, so as to afford "an irregular wavy or crinkled surface. It is evi- "dent from an examination of the machine "Exhib- "it Robjohn machine," and the "Exhibit Robjohn "patent," that the inventor was wholly intent on a "construction which combined with well known flut- "ed rollers, would enable him to produce readily a "double ruffle or two-fold ruffle in duplication, and "that he had no idea or design of making or con- "structing a machine for the purpose of making "or producing thereby a trimming of the charac- "ter described and illustrated in the complainants' "exhibits, reissue 3000 and 3001; or, if he did he "entirely failed in description and construction."

The whole argument of the appellant proceeds upon an erroneous assumption of the construction of the patent. He argues that because the Robjohn guide in a portion of its length is arched, therefore it must

be *the* arched guide of King, leaving out of view the necessary condition that the King guide must be adapted to operate on the fabric to be *fluted*, not on a narrow, separate piece; that it must deliver the material in a loose, full condition, so that it can assume the puffed form, and that it must be arranged opposite the plain portion of the rollers. The argument also proceeds upon the same error previously noted, that the rollers of King are *any* rollers, because he calls them "suitable" rollers. If these two errors are corrected, and the whole evidence of the experts read, instead of the fragmentary extracts, no difficulty will be found in the Robjohn machine.

The Court below properly decided that the Robjohn patent and Robjohn machines and guides did not embody the combination described and claimed by the complainant.

Judge Blatchford said:

"As to the Robjohn patent and Robjohn guides "1 and 2, the machine was designed to make two "double-fold ruffles at one and the same time. "It has no provision for taking up an increased "width of material, or for crinkling a central por- "tion of the material. Nor could such guides as "the guides S and T produce in connection with "the Robjohn machine the results produced by "the mechanism covered by the claim of the re- "issue No. 3,000."

It is clear that the Court decided correctly, that the mechanism shown in the Robjohn patent and embodied in the Robjohn machine and its accompanying guides, were substantially different from complainants' combination, and did not affect the novelty of the complainants' claim. The decree in that particular was, therefore, correct.

2.—The Weitling Machine.

This machine is illustrated by the application for a patent of Wm. Weitling, filed March 8, 1855, and withdrawn April 16, 1855, in the patent of the same Wm. Weitling granted August 27, 1872, (four years after the complainants); in a machine called "Exhibit Weitling machine" said to be an old machine of said Weitling's, and in a very important *addition* to said machine which is marked "Exhibit Weitling Bar" (see p. 144). This last is an alleged *modern reproduction* of a device which had been *lost*.

The evidence in regard to the Weitling machine will be considered first, in reference to the machine as described in Weitling's orignal application for a patent, in 1855; and second, with reference to the oral evidence which is intended to supplement said application, and to show that the machine actually was something different from, and additional to what it was there described to be.

The Weitling machine, as shown clearly in the drawings of Weitling's application of 1855, and as clearly described in the specification, need not detain us long. It presents nothing which bears the slightest resemblance to the machine of the complainant. It is a fluting machine, differing from an ordinary one only in this, that the pattern to be impressed by the machine on the fabric passed through it, is not wholly a pattern of plain, straight flutes, parallel with each other and the axis of the roller on which they are formed; but is a variegated pattern, some of the flutes running in diagonal or other directions, and such variegation is produced by a corresponding pattern on movable rings which are fitted on to the rollers of the fluting machine, and which can be changed, according to fancy, to produce a given pattern.

There is no suggestion of the use in connection with this machine of any guide, or device, for draw-

be *the* arched guide of King, leaving out of view the necessary condition that the King guide must be adapted to operate on the fabric to be *fluted*, not on a narrow, separate piece; that it must deliver the material in a loose, full condition, so that it can assume the puffed form, and that it must be arranged opposite the plain portion of the rollers. The argument also proceeds upon the same error previously noted, that the rollers of King are *any* rollers, because he calls them "suitable" rollers. If these two errors are corrected, and the whole evidence of the experts read, instead of the fragmentary extracts, no difficulty will be found in the Robjohn machine.

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There is no suggestion of the use in connection with this machine of any guide, or device, for draw-

ing in a greater fullness of the fabric opposite any given portion of the rollers; nor is there any suggestion of the use, either with or without any guide, of any flat portion or open space between the rollers, to allow for the passage of material of surplus width, as in the King machine.

The application of Weitling, therefore, is of no benefit or advantage to the defendant, but it is of the highest importance, as showing what the invention of Weitling really was, in view of the present fact that the defendant now seeks to show that the Weitling machine was something different from, and additional to that described in this application.

It is plain that upon an issue as to what the machine really was, the cotemporaneous, documentary evidence, bearing the name and the oath of the inventor himself, made at the time, is of the highest value when compared with the attempted recollections of witnesses assuming to give us what they remember it to have been, nearly 20 years ago.

The evidence in support of the existence of additional features in this Weitling machine, not shown, described or hinted at in the application for a patent, comes from four witnesses, (1.) Mrs. Weitling, the widow of the said William Weitling, (2.) Miss Toedt, the sister of Mrs. Weitling, (3.) Robert Werner, the defendant himself, and (4.) a Mr. Korbel.

The evidence of these witnesses will be considered briefly in detail. We will first dispose of the evidence of defendant, Werner, and of the witness Korbel, for they had such limited opportunities of knowing anything about the machine in question, that their evidence is of little value.

It is said that the witness, Korbel, and the defendant, Werner, in the year 1863, about nine years before giving their evidence, once called at the house of Mr. Weitling, at Avenue A, (p. 178, q. 3 and 5). It appears that Korbel "was helping

"Mr. Werner build a button hole machine," (p. 181, q. 34), and they went to Weitling's place "to "look at a button hole machine for the purpose "that Mr. Werner could get an idea how to make "a new one," (q. 35). At this time Werner and Korbel stayed at Weitling's house "about an hour" (q. 33); and Korbel expressly says, that they were engaged in examining the button hole machine, which was a complex and difficult machine for "about an hour" (q. 44). So that on his own showing, they had but little time for examining anything else, and probably did little except to attend to the specific business they went for. They say, however, that while there, they did see a machine which they now say is the exhibit Weitling machine.

Werner says that this machine "was standing on a "bureau so far as I can recollect." (p. 171, q. 131.) Korbel does not state in what position the machine was. Korbel says (p. 186, q. 79,) "I simply look- "ed at the machine as Mr. Weitling showed the "same to Mr. Werner and Mr. Aufermann. As to "its value and importance I did not form any opin- "ion then, and Mr. Weitling did not express him- "self as to its value or importance."

When asked if he had thought much about that machine since his single sight of it, more than nine years before, he says, (q. 80,) "I have not thought "much of it *because it did not interest me*." He further says that he never saw it again from the single occasion in 1863, down to the time of his examination in this case. (p. 180, q. 21.) In regard to the arrangement of the different rings upon the machine so as to produce any given pattern, he says, indeed, that as he remembers it there were some flat or unpattern rings about "three-eighths of an inch" wide; "but I cannot say for sure." (p. 182, q. 59.)

But he says, when asked what particular arrangement of the rings he saw, "I have only seen Mr.

Weitling detach and attach said rings to the spindles "of the machine in different ways, and explain how "the different patterns could thereby be produced; "*but I don't know in what particular manner.*" He says that he never saw the machine operated to produce any goods; he merely saw it turned without goods in it, (p. 187, q. 93). When asked how long he was looking at the machine, he says, "it "*might* have been *nearly* a quarter or half an "hour" (p. 182, q. 53), although he had previously, as we have seen, stated that the visit only occupied *about an hour*, and they were *about an hour* examining the button hole machine they came to see. When asked to indentify the "Exhibit Weitling Bar," as attached to this Weilting machine, he says very indefinitely, "yes, I have seen a similar one" (p. 179, q. 8), *afterwards* he says it is exactly like (95).

It is plain, therefore, that so far as the witness Korbel is concerned, his evidence as to the construction of the machine is of very little value. He does not even assume to say that he saw any combination of a guide for throwing in greater fullness of material, arranged opposite to a plain space or opening between fluting rollers. In fact, he expressly says that he does not know what arrangement of rings or rollers was used.

The next witness whose testimony in relation to the Weitling machine which we shall consider is the defendant Werner. Werner says (p. 171) that he went with a Mr. Aufermann to visit Wm. Weitling in Avenue A, in June, 1863. *He says nothing about the presence of the witness, Korbel, at the time.* He says that he went to see Weitling because he, at that time, "made a button-hole ma- "chine for Wm. Aufermann and Wm. Weitling in "that year, 1863." (Q. 121.) When asked how long his visit was he says: "I don't remember ex- "actly the time; it may be an hour, more or less." (Q. 126.) In regard to the Weitling machine he says that it was at the time "standing on a bureau,

"as far as I can recollect." (Q. 131.) When asked "Can you tell how many and what kind of rings, "if any, there were on the spindles of that machine "at that time," he says: "*I can't say* how many "rings, there were on those spindles, but I remem- "ber to have seen *some* rings, of which some had "a flat appearance." (X-Q. 132.) When asked if he ever saw the two rings, Exhibit Weitling rings, which were put in evidence, put and used upon the spindles of the machine, he says (p. 165, q. 67 and 69): "I have seen rings on the Weitling machine "and near the same, *but I do not recollect any more* "*in what position they were on the spindles.*"

He further says: "I have not seen the machine "in use." (Q. 131.) He does not say that he ever carefully examined this machine, nor did he, on direct examination, pretend to testify that it ever had any guide or bar, such as the Weitling bar, connected with it. If it had had any such device, in fact we may be very sure that the defendant would have remembered it. When shown the Weitling bar on his direct examination, he does not suggest that he ever saw it before or knew of its use. He merely answers, "I have "looked at the bar, marked Exhibit Weitling bar: "the purpose of the same is, *in my opinion*, to "pass over the same material," &c. (P. 158, q. 40.)

On subsequent examination, he says he did see it (p. 177, q. 171), and that the present assumed reproduction was made through his instrumentality, "4 or 5 weeks ago," (p. 189, q. 193-4.) The doubt that seems to pervade Werner's testimony is of the highest importance, when we remember that he is the defendant in the case, and would be likely to remember, or think he remembered, the alleged features of the machine, if they had in fact existed. That no such alleged features did in fact exist is strongly corroborated by the fact, that in a former suit on this same King patent Werner was in the employ of the defendant, or a person working for the defendant, and at that time made

no mention of this machine, nor was it in that suit put in evidence. (P. 173, q. 145 to 149.)

"We next turn to the evidence of Mrs. Weitling and her sister, Miss Toedt. The evidence of these witnesses clearly shows that any use of the machine was merely experimental.

Mrs. Weitling was called as a witness October 28, 1872 (p. 119). When asked (q. 2,) if she is "acquainted with what are known as flutings, puffings "and crimpings, and have you ever made them?" she "says, I am well acquainted with them; I made them "for patterns *experimentally* about between 17 "and 18 years ago." She then goes on to state her husband invented a machine for making fluting, crimping, puffing, and when asked if he "ever "made crimping, fluting and puffing on or with "the machine he invented," (q. 7,) she says, "he "made it *by experiment and sample*." The question being repeated (q. 13), "Did your late hus"band make fluting, or puffing and crimping, or all "of them, with the machine you have mentioned?" she answers again, "yes, *by experiments*." When asked (q. 21,) if "any other person besides your "husband made puffings or flutings, or both, and "crimping on that machine," she says, "I made "it about 17 years ago *for sample* from time to "time, I and my sister."

When asked again (q. 24), if she had made any "puffiings or flutings on that machine as trimmings "for articles of dress," she reiterates again, "I "made it *for samples for experiment*."

Again, when enquired how long ago the goods were made, she says, (q. 31), "Seventeen years afterwards, from time to time, and *for sample and experiments*." When further asked, (q. 46) whether she knows "if any person or persons used "those exhibits, (the machine in questions), and if "so, when and for what purpose," she says, "we "used them for making patterns and experiments."

It will be observed, that up to this portion of the examination of the witness, the machine had been put in evidence with its rings, (neither of which

rings are plain or flat), but no guide or bar, such as the Weithing bar, have been produced or even hinted at. It will be observed also, that nearly all of the questions were exceedingly leading and suggestive of the answers desired.

At this point in the examination the testimony of this witness was suspended, and her sister, Miss Toedt, was next called. She says that she recognizes the Weitling machine, and that it was the invention of Wm. Weitling (p. 124, q. 8). She is asked "how long ago she made puffing, fluting, "and crimping with this machine," and she says: (q. 4, p. 144) "*I made them about* 16 *or* 17 *years* "*ago*, and have continued to make them since." She is shown a sample of puffing called "Exhibit "Weitling puffing," and asked to state "whether "or not you know how that was made," (p. 124, q. 16), and she answers, "I know how that was "made; it was puffed on Mr. Weitling's machine. "It was made in 1855." But further on, even on her own direct examination, when shown the same Exhibit (q. 25), and questioned about it, she says: "*this piece was made before I came to New York*, "17 years ago." Another sample of puffing called, "Exhibit Weitling No. 2," is produced; but that she says was made only a few months before, in January, 1872, (p. 131, q. 110). She indeed says that similar goods had been made previously "10 or 11 years ago;" but when asked (q. 119) "when "trimming was made 10 or 11 years ago similar to "Exhibit Weitling puffing No. 2, do you remember "exactly how the rings on the machine were "placed?" she answers: "I can't remember just "exactly."

This witness is *not asked* to identify the Exhibit Weitling bar, nor to describe any guide or bar as used with the machine, nor does she describe the use of any flat rings at all, except in answer to a very leading question (x-q. 54). She throws some important light, however, on the merely experimental character of the machine, for she says (p. 126, q. 35): "Do you know whether or not Mr.

"Weitling was *anxious* to make his machine suc-"ceed in being useful or not?" She answers, "Yes, sir." She further says that (q. 44) "he "had an advertisement in the paper; he was try-"ing to get a partner, a man to go along with him "and do business with him." She further says (q. 45) that "a good many persons called and ex-"amined the machine." When asked to define what she means by the number who called, she says (q. 57) that "there was one at a time, but five "or six came" (q. 58). "I saw the men come and "go into the room where the machine was and "heard them ask to see the machine." She is unable to give any names of any persons who called, except she says (q. 41) "he exhibited it to Mr. "Aufermann; Mr. Korbel and Mr. Werner saw it, "and a great many others." But both Mr. Werner and Mr. Korbel state that they went there for an entirely different purpose, and only saw this machine casually. It is very evident, from the endeavors that were made to make this machine practical, and from the attempts that were made to interest others in it, that it never was a complete and practical machine. It never could do anything more than an ordinary fluting machine could do. It never had the capacity of producing the popular and widely known goods manufactured on the King machine, and hence never interested the persons who came to see it. It is to be remembered, also, in regard to this witness, that her pretense in remembering the particular character of the machine, seventeen years before, must rest on very slight foundation. She was at the time a little girl, only fourteen years old, and it is unnatural to suppose that she should have had the particular construction or characteristics of the machine impressed on her mind.

Miss Toedt's examination being concluded without her proving anything of importance to the defendant, Mrs. Weitling, is then recalled for further

examination, and is now for the first time introduced to us through an interpreter (p. 143, f. 298). She is asked to identify the Exhibit Weitling puffing No. 2, and she now says that specimens like it "were shown *as samples* in 1855; an *attempt was* "*made* to do business with such puffing" (q. 56). When further asked (q. 58): "Please state whether "or not when these puffings were so made after "1855, they were used or shown as samples;" she says: "They were *only shown as samples.*" The brief of the appellant urges that these fabrics were not mere experiments as expressly testified by the witness, but were made as matter of regular business.

The appellant's counsel says on page 8: "Weit-"ling did not make and use said machine for ex-"perimental purposes only, but he made fluted "puffings thereon, for merchants, in 1855, for man-"tilla trimmings." But reference to the question referred to in the preceding one shows that all he did was (q. 59) in 1855, he made *samples* for "mantilla trimmings for three different firms in "New York. He made samples for all three firms. "Since that time he made *attempts* to do business— "*did not succeed*"

The very fact that he had opportunities of bringing his machine and its product into notice, and that he utterly failed in attracting any attention to it, or of securing any approval for it, shows conclusively that neither the machine nor its product can be properly compared with the successful practical and highly useful machine of Kings.

It is only at this point in the examination that the addition to the machine called the "Weitling bar" is introduced. The witness is asked (p. 144, q. 64,) "please look at this bar marked Weitling bar, and "state what you know about that bar"; he says, "the object of this bar is to guide the stuff *from the* "*machine* so that the puffings or similiar kinds of "work shall come out perfect." When asked (q.

65,) "did you or not ever see a bar like that ar-"ranged as that bar is arranged on these standards "before this time, and if so, state when you saw it "arranged so for the first time as near as you can re-"collect?" (This question is obviously the most leading and suggestive of the kind). "A. I saw this "bar for the first time in 1855, on those standards "on this machine." She is then asked (q. 66,) "is this *the same bar* that you saw in 1855, or was it *another* bar? A. This is another one."

She further says, (q. 78,) that she lost the original bar "about the 1st of May last." (1872.)

We have seen that the bar now offered in evidence was made about 4 or 5 weeks before.

Now, if we refer to the testimony of Robert Werner, we shall find that the defendant had access to this machine during the pendency of this suit, and while, according to Mrs. Weitling's statement, it was provided with its original bar. Werner says, that having seen the machine in 1863, (p. 172, q. 134), "when this suit was first talked about, "I remembered this machine and went to Mrs. "Weitling, who showed the same to me again." This suit was actually commenced in October, 1871. Werner says, he went to look up this machine and saw it when this suit was first talked about, yet this original bar did not disappear until the first of May, following.

It would seem, that if the original device had been of a character which would have been important to defendants in this suit, that it would hardly have been allowed to be lost, and replaced by a new fabrication. That this alleged bar was not a part of the original machine, but is a recent device, is plainly shown by Weitling's application for a patent at the very time when it is claimed to have been used. When Mrs. Weitling is asked, (p. 146, q. 82), "Do you know whether that frame "and guide bar was attached to the model of that

"machine, when your husband sent the model to "Washington?" she says, "I am under the im- "pression that it was there, but I am not certain." (q. 83). "Did you ever hear your husband say "any thing about the frame and guide bar being "sent to Washington, if so state when? A. It is "possible; perhaps, not; it is too long to recollect; "I supposed it had been sent." (q. 84). "What "reason have you for the impression that the "board, standards and guide bar were sent to "Washington? A. *I supposed that my husband intended to have the whole of his invention patented.*"

The court will be likely to indulge a similar supposition, that the inventor did intend to have the whole of his machine patented; and the entire absence of any suggestion of this alleged important addition to the machine in his application and model is strongly suggestive that the invention did not include any such device. Mrs. Weitling throws strong light on the imperfect character of the machine when she, too, speaks of persons coming to see it in answer to the advertisement for a partner. She says (p. 146, q. 80), in 1865 "he had an advertise- "ment in the paper offering this machine for sale, "as far as I can recollect; different gentlemen "called at different times for the purpose of seeing "the machine. He showed the same and explained "it to them. They went off and *did not call again.*"

It is plain from this evidence that the Weitling machine was never anything more than a mere machine for making different fluted patterns on goods, a subject of no importance or interest. It never could have produced such a trimming as King's, and never could have embodied the combination of a guide for throwing in greater fullness with the fluting rollers suitably formed for that purpose. If any attempt was ever made to produce any such trimming on it, it must have been of the most experimental character, was wholly

abandoned, and the alleged device for use in combination with the machine lost or destroyed. The Court properly held upon this evidence that "the "Weitling machine and apparatus, whether as "originally presented to the Patent Office, or as "existing and used before King's invention, did "not contain the combination of the claim of re-"issue No. 3,000. Moreover, such use as was made "of it before King's invention was wholly experi "mental, and it was abandoned by its inventor as "an abortive experiment."

See *Odhom* v. *King*, 1 Cliff., 592.

Reference is made to the fact that Weitling did, however, send a crimping machine to England by a man by the name of Tuily, and that three machines were sent to France in 1855, one of which was exhibited in the Exhibition at Paris. These machines, however, have no bearing upon this question, for it does not appear that any one of them contains the combination of elements claimed in the King re-issue. They were undoubtedly, as described in the French certificate put in evidence (p. 232), merely, "a machine which serves for crimping different "paterns of rollers, shirt strips, cuffs," &c. Mrs. Weitling is expressly asked (p. 150), "you say in "answer to q. 86, that he sent a complete machine "to England. Can you state what kind of a ma-"chine that was, or what it was like? A. It was a "crimping machine like Exhibit Weiting machine: "*I do not recollect how the rings were set.*"

Again, when asked particularly as to the guide bar (q. 97), "Please state whether or not, if you "know, if the board and standard and guide bar, "constituted a part of that machine," she says, "*that I cannot tell.*" When asked as to the French machines, the testimony is as follows, (p. 153, q. 113). "Are you able to state whether or "not, your husband sent one of the machines he "invented to France, if so, state when that was? "A. In the spring of 1855, he sent three to France.

"Q. 114. Were those machines which you say he "sent to France, in the spring of 1855, like the "machine Exhibit Weitling machine in evidence in "this case? A. *I suppose* they were the same. "*I did not see them packed.*"

It is clear, therefore, on this evidence, that there is no proof that the Weitling machine ever contained the combination of devices described and claimed in the complainant's patent. Undoubtedly, Weitling did make, in 1855, a crimping machine like that shown in his application for a patent; but that is of no importance in this case. There is no proof deserving of credence to show that he ever combined with it a guide for throwing in greater fullness into a portion of the material, or that he ever arranged in combination with said guide fluting rollers in such form that they would convert the material so guided into such a fabric as that of King's.

Everything which is now adduced to support any such theory is of recent manufacture. The puffing marked "Exhibit Weitling puffing No. 2" was, as we have seen made during the progress of this case, for the purposes of the case, and the same is true of the "Weitling bar." The elaborate extracts in the appellant's brief from the evidence of witnesses to show that the Weitling puffing No. 2, and the guide bar, Exhibit Weitling bar was substantially the same as King's devices is of no importance. The facts clearly demonstrate either that they were never used at all, or if used only as abortive and abandoned experiments.

Nor is the argument that Weitling did not abandon his invention any more relevant to the case, because the invention which it is urged he did not abandon, is the one for which he made application for a patent, and that no one pretends, is substantially the same as King's. It might be admitted without prejudice to the case, that Weitling did not abandon the invention for which he made application for a patent, but that does not prove that

he ever, in fact, made, or if made, that he ever perfected the *additional features* which are now set up as supplementary to it.

These supplementary features rest merely upon oral evidence of the most unsatisfactory kind, unsupported by any documentary proof, and plainly at variance with the documents which do exist.

In such a case the presumption in favor of the patent is not to be overcome. The court does not regard with favor attempts to invalidate a patent like that disclosed by this evidence

The cases cited below are quite clear upon this point.

(3.)—The Muller Guide and Rings

This defense is illustrated by two rings and a number of guides. The rings are Exhibits Muller No. 3 and No. 4 (p. 185), and the guides are illustrated by a *drawing*, Defendant's Exhibit Muller No. 1, a *pasteboard model*, Defendant's Exhibit Muller No. 2 (p. 184), and "a brass instrument," marked Muller No. 5 (p. 199).

This defense is attempted to be sustained by testimony of the most meagre and unsatisfactory description

A single witness only is examined, to wit, Simon Muller. The witness is called in November, 1872, and asked if he is acquainted with fluting machines, puffing machines and crimping machines, and he answers in the affirmative (p. 184, q. 3). He is then asked (q. 4) "whether or not you have "ever known *anything* used in connection with "machines of that kind?" (what kind of machines, whether fluting, puffing or crimping, are not specified) and he answers, "Yes, sir; I have used differ- "ent kinds of guages and guides."

He is then asked (q. 5) on what part of the machine the guages and guides were placed. He says, very indefinitely, "upon a plate which is screwed "on the frame of the machine" (still no particular machine is specified).

He is then shown a Robjohn machine and a Werner's machine, and asked, in a very leading manner (q. 6), "Whether or not the plate screwed to "the frame of the machine, as mentioned by you, "was arranged in a manner similar to either one or "both of these exhibits?" and he answers, "The "plate of which I speak was fastened to the ma-"chine of which I speak" (still without saying what kind of a machine it was) "*like* the plate in "front of the Exhibit Robjohn machine."

He is then asked to describe, "as near as you can recollect," the kind of guages or guides, and he gives a brief description, and says (q. 7), "I pro-"duce a *rough penciled drawing* of what I refer "to, and a *pasteboard* model of same."

He is then asked (q. 8) to look at Exhibits S and T (which we have before discussed in connection with the Robjohn machine and shown to be immaterial), and state whether he ever saw "anything "*similar* to them before," and he says, "I have "used *similar* ones in 1862, in connection with "fluting machines."

He is then asked (q. 12), "Did you see *any* of those guides used after 1862, if so, when and where?" and he answered, "I did; in the city of New York, in 1863, 1864, 1865 and 1866." He however, fails entirely to specify *which* guides he saw used at either of those times, whether the exhibits S and T, or the straight guides he had previously mentioned, or the one of which he produced "a rough pencil drawing."

He is then asked (q. 13), what the guides were used to produce, and what material was used?" and he says, the guide represented by Muller, No. 1 and 2, "was used to produce, what we called, diamond trimming, manufactured of silk, and we used guides like exhibits S and T to produce trimming. Sometimes, smaller or narrower guides were used for the same purpose." He entirely fails to state, however, when the guides No. 1 or 2 were

used. His answer would be equally true if the flat guides, or the narrower or smaller guides, were used in the years specified.

He is then shown (q. 14) two rings, and asked to state what they were used for, and he says, "They "were used in 1863, in a fluting machine to make the "diamond trimming I have described above. They "were placed on fluting rollers, between two rings "with fluting meshes one above the other, so as to "fit in each other, and they were located opposite "the guides," (but he does not state *what* guides.)

His examination is then suspended, and ten days afterwards he is produced again, and a brass instrument, marked Muller No. 5, is shown him, and he is asked (p. 199, q. 17), "When you first saw an instrument *like* that, and what it was used for?" and he says, "In *about* the latter part of 1863, or "first part of 1864, we used it on a fluting machine "for guiding the goods; we made diamond trim-"ming with it."

This guide is made of two portions, one flat, and the other having a protuberance, or arch; and he says that these two parts were used singly or together (q. 19), apparently quite indifferently.

When asked (q. 22) "can you state *positively* "that the exhibit Muller No. 5 is or is not a cor-"rect representation of the guides you used at the "times and place named by you," he says, "Substantially I can."

This answer seems not to have been very satisfactory, for his deposition is *immediately suspended*, without his signing it (p. 200); and the defendant Werner is recalled, and Muller is not produced again until nearly *a year subsequently* (November 11, 1873) (p. 220.) On this occasion, he is cross-examined in regard to where he got the rings Exhibits Muller 3 and 4, which were produced, and which it will be remarked are the only portions of the machine which he testifies about, which are pretended to be identical with the ones he used, all

other devices being mere models or modern reproductions. He is asked (p. 221, q. 32), "what "has become of the *rest* of the machine to which "said exhibits Muller No. 4 and Muller No. 5 belonged," and he says, "I can't tell where the machines went to; they were all sold. *Mr. Werner, the defendant, bought two*, and Mrs. Westerick bought two. He is then asked (q. 33) "How came you to "keep in your possession the said two embossing "rings? A. *I did not* have them in my possession." He is then asked (q. 35) "State how you were able to recognize said exhibits Muller No. 4 and Muller 5 as being the idental embossing rings which you say you used in 1863? A. It is *my best opinion* that they are the same identical ones. *I took them out of the machine at Mr. Werner's place of business.*

He then says, in answer to q. 36, that he and Werner, the defendant, were in business together for about six months, and when asked (q. 37), "In "what condition was the machine in from which "you took the said embossing rings Exhibits Mul- "ler No. 4 and Muller No. 5, at the time you took "them from the machine?" He says: "*The ma- "chine was in working order.*"

It thus appears that the very machine, a part of which, and assumed reproduction of other parts is now produced by the witness Muller, was actually sold to the *defendant* himself, and was in his possession and in working order. Yet, remarkable to relate, Muller is the only witness in regard to this alleged use of these devices; and the defendant Werner, though *often* called as a witness, *nowhere gives any explanation* of where this machine or its guides is, to which so much importance is now attached.

This is rendered even more remarkable, when an examination of the record shows us that Werner is not only examined on matters of fact, but also as an

expert, on many different days and at different times, and testifies to his knowledge of the use of *all the other* machines and exhibits put into the case. We must remember, too, as already shown, that this is not the first appearance of Mr. Werner in a suit for an infringement of the King patent, but he had been in the employ of parties interested in the defence of a prior suit, yet the Muller devices are now for the first time brought forward.

Under the circumstances, we may well say that the testimony in regard to the alleged Muller guide, is of the most unsatisfactory description.

Where a patent has been frequently sustained, like the present one, it will not be overthrown by the production of a single and unsatisfactory witness, testifying to matters from recollection merely, which occurred a number of years before.

In *Woodworth* v. *Sherman*, 3 Strong, 171, there had been possession for some considerable length of time, under the patent, and the patent had been extended, and a judgment had been recovered against another defendant, and Judge Story held "that after a lapse of so much time, the affidavit of a single witness that the patentee was not the first inventor would not outweigh the oath of the patentee and the general presumption arising from the grant of letters patent."

It has often been held not only that the burden of proof of such a defence lay upon the defendants, but they must absolutely demonstrate the prior existence of the invention upon which they rely.

In *Wood* v. *Cleveland Rolling Mills*, 4 Fisher, 550, Judge Swayne said: "When the defence is "made out it is the duty of courts and juries to "give it effect, but such testimony should be "weighed with care, and the defense allowed to "prevail only when the evidence is such *as to leave* "*no room for a reasonable doubt upon the sub-* "*ject.*

In *Hawes* v. *Antisdel*, 8 Off. Gaz. 675, the court said: "In order to defeat the patent on the ground "of want of novelty, the proof of prior use, or "previous knowledge, must be such as to establish "the fact clearly and satisfactorily *and beyond a* "*reasonable doubt*. Where the proofs are contra- "dictory, mere preponderance is not sufficient to "sustain the allegation, preponderance in such "case *must be such as to remove all reasonable* "*doubt*."

In *Perham* v. the *American Button hole Company*, Judges Strong and McKennan, said: "The "evidence must establish clearly priority of a "completed and useful machine over that of a "patentee, or it is unavailing. *To doubt upon this* "*point is to resolve it in the negative*."

In *Crouch* v. *Speir*, 6 Off. Gaz. 187, Judge Nixon said: "*If a reasonable doubt exists* as to the truth "of the evidence adduced to impeach the novelty "of the invention, the presumption in favor of the "patentee *must prevail over it*."

This rule has been stated by this Court with even greater rigor in the case of *Coffin* v. *Odgen*, 18 Wallace, where the Court said: "Invention or discovery "relied upon as a defence, *must have been complete* "and capaple of producing the result sought to be "accomplished, *and this must be shown by the de-* "*fendant*; the burden of proof rested upon him, *and* "*every reasonable doubt should be resolved against* "*him*. If the thing were embriotic or inchoate; "if it rested in speculation or experiment; if the "process pursued for its development had failed "to reach the point of consummation, it cannot "avail to defeat a patent founded on a discovery "or invention which was completed, while in the "other case there was only progress, *however near* "that progress may have approximated to the end "in view. *The law requires not conjecture but* "*certainty*."

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But the Court below put its decision in relation to the Muller guide, upon another and equally satisfactory ground, to wit, that the alleged combination of Muller did not embody the specific combination patented by King.

We have already defined the King combination and shown that it consists of two elements or mechanical devices for producing a peculiar result, to wit, a fluted *puffing*.

We have shown that in order to create "puffing" there must be produced by the machinery between the fluted portions of the fabric a full and loose portion, whose surface is "puffed or crinkled," but is not shaped with that regularity which is produced by a set pattern upon the surface of fluting rollers.

It is only by throwing, by the mechanical devices described, or their equivalent, an increased fullness of material into an open space narrower than the fulled material between the fluting rollers, so that the rollers *do not press it*, but merely prevent it from being *too full* or *loose* that this result is attained.

The alleged Muller combination is not even alleged to have possessed these features, and never could have produced "puffing" at all. Muller himself says (p. 222, q. 51) that the guide was "*only* used with the machines above described, "*which had* NO *plain rings* but had ALWAYS *em-*"*bossing rings* liks Exhibits Muller No. 3 and "Muller No. 4, so far as I know."

It seems quite evident, too, that Muller never had any conception of the idea of obtaining any greater fullness by the use of a guide; he certainly hints at none, much less had he any conception of the idea of making "puffing" by throwing in an excess of fullness, by means of a guide, into a blank space between fluted portions of the roller; for even according to his own statement he seems to have

used the different forms of guides quite indifferently, (p. 199, q. 19.)

This is not a case of a mere change in the configuration of the fluting rollers.

Doubtless it would be the case that a *mere* change of pattern in the fluting rollers would not be patentable. This is substantially what the Weitling machine was. But the King patent is *not* for *merely* changing the pattern. It is for producing an article which had never before been successfully made, *at one operation*, by machinery, and without a laundering, by a *new combination* of devices, to wit, by the guide for throwing in the greater fullness, combined with the rollers described, having their plain portions opposite to that portion of the guide which produced the excessive fullness; it was by this combination that a different class of goods was produced, substantially dissimilar from any fluted or embossed goods.

The appellant urges, again, at this place, his mistaken argument that the rollers of the King machine are not the rollers he described, but any "suitable rollers." It is only on this supposition that the contention is made that the two combinations are substantially the same.

Even Mr. Renwick, the defendants' expert, cannot be induced to consider the two combinations identical. After describing the points of similarity between the two machines, he says, (p. 196, f. 408), "the said two combinations differ from each other "*substantially* in the peculiar form of the fluting "rollers. Thus, the fluting rollers of exhibit re-issue 3000 have smooth zones or rings at the sides "of their fluting teeth in such a position relatively "to the guide that the material, after passing "through the guide is caused to pass through the "said smooth zones; whereas, in the Muller ma-"chine, with Exhibits No. 2, No. 3 and No. 4, "there are no smooth rings in the same positions "relatively to the guide. So, also, in the combina-

"tion exhibit re-issue 3000, there is an open cylin-"drical smooth space or zone upon each fluting "roller between the two rings of fluting teeth; *so* "*that the configuration assumed by the arched* "*portion of the material is left to chance.* Where-"as, in the Muller machine, with Exhibits No. 2, 3 "and 4, there are figuring rings between the two "rings of fluting teeth, so that the configuration "imparted to the arched portion of the material is "not left to chance, but is determined by the figur-"ing rings."

He then goes on to say, that if, however, the combination recited in the said claim is "*assumed* "to include *every* combination, the two implements "which are, first, a guide constructed and oper-"ated substantially identically with the guide E, "and second, fluting rollers for imparting *any* de-"sired configuration," then, he thinks that the devices would be substantially the same. But, this construction we have shown cannot be assumed, for it is *not* held by the complainant, is plainly in opposition to the proper construction of the patent, and is not adopted by the Court.

The Court, therefore, properly decided, that The Muller Guide "used as it always was with the "Muller Rings No. 3 and 4, which were diamond em-"bossing rings, and made a diamond figure on the "material, and occupied all the space not occupied "by the fluting rollers, it does not present the "combination set forth in the claim of reissue No. "3,000, for the purpose specified in that reissue."

THIRD POINT.—The question of infringement.

The defendants' machine plainly infringes the complainants' patent, and it was properly so decreed by the Circuit Court.

But it is contended on behalf of the appellant, that even though the complainants' patent is valid, yet that it is not infringed by the defendant.

This contention is made on the ground, that his device for throwing greater fullness into the central and plain portion of the roller, thereby producing a puffing, is substantially different from the arched guide E of King, and hence, is not an equivalent for such guide.

It is urged that the Werner device, which is called a "detent," is not an equivalent for King's—

(*a.*) Because it operates in a different manner, holding the goods back instead of arching them upwards.

(*b.*) Because, it is contended, that the Werner device was not known to be a proper substitute for the King's device, at the time King's patent was granted.

(*c.*) Because the Werner machine is patented, and that it is claimed is conclusive evidence that the machines differ, and hence, one is not an infringement of another.

Each of these points will be considered in order.

(*a.*) It is a mistake to suppose that the Werner device operates in any manner substantially different from that of King, and this can readily be demonstrated by an inspection of the devices, and an analyzation of the method in which each works. The fact that they differ in external form, is quite immaterial. The Court looks through form to substance. If we examine the King guide, we shall see that it operates to draw in a greater fullness of material to be operated upon by the fluting rollers by raising or pressing upwards the central portion of the fabric, so as to deflect it from its plane of motion, as the fabric passes in between the two rollers.

It is this pressing the material out of the straight course in the centre which throws the greater fullness of material into the centre.

The only difference between King's and Werner's

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The only difference between King's and Werner's

devices is that the resisting power in Werner's machine is concentrated at a single point and that by it he holds a portion of the material *back*, in the plane of motion, whereas in King's machine the resisting power is distributed over a curved surface, and by it he holds *up* a portion of the materials at right angles to the plane of motion.

If this guide of King's should be made in a V shape the greater part of the upward pushing would be done at the vertex of the angle, and the configuration given to the cloth would tend to be in the form of the guide. But the guide would not be substantially altered by this change. The force applied to the material to push it upward is more evenly distributed by the arch shape, but if the guide was polygonal or of triangular shape the operation would be in each case precisely the same and governed by the same laws.

Thus it is seen that the defendant's machine uses in substance the same contrivance as a V shaped King guide, except that he applies the force from above and holds his material in the centre backwards, instead of upwards. The result of each contrivance is merely to throw greater fullness into the centre of the material, though, from the fact that the force which operates to do this is applied at a single point in Werner's machine instead of over a curved line as in King's machine, the fabric when delivered by the device tends to assume a more regular form.

It has been frequently held that the substitution of one direction of applying power for another is a mere mechanical change.

In *Ives* v. *Green*, 10 Off. Gaz., 336, the claim was for the combination of the saw "with a pair of *curved* guides at the upper end of the saw," and other mechanical devices. This Court said, "The "defendant is using a saw in which the guides *are* "*not curved*, it is true. * * * * The question "in the case, therefore, is whether the defendants

"used the same or equivalent means, that is, the "same or substantially the same combination of "mechanical devices. The substitution of guides "at the top, made crooked by a broken line in- "stead of a curved line, is too transparent an "imitation to need a moment's consideration. "A curve itself is often treated in mathemat- "ical science as consisting of a succession of "very short stright lines, or as one broken line con- "stantly changing its direction. * * * * At "all events in mechanics, when, as in this case, a "broken line is used instead of a regular curve, be- "ing deflected at one or more points by a very "slight angle, and performing precisely the same "office of curves similarly situated, the one is "clearly the equivalent of the other."

In *Winans* v. *Denmead*, 15 How. 330, the claim was for the body of a car "in the form of a frustrum of a cone." The defendant used the car in the form of a pyramidal section. This Court said:

"Where form and substance are *inseparable* it "is enough to look at the form only. Where they are "separable, where the whole substance of the in- "vention *may be copied in a different form*, it is "the duty of courts and juries to look through the "form for the substance, for that which entitled the "inventor to his patent, and which the patent was "designed to secure. Where that is found there "is an infringement, and it is not a defence that it "is embodied *in a form not described and in terms "claimed by the patentee*. Patentees sometimes "add to their claims an express declaration to the "effect, that the claim extends to the thing patent- "ed, however its form or proportions may be va- "ried. *The law so interprets the claim without "the addition of those words.* * * * It is not ne- "cessary that the defendant's car should employ "the plaintiff's invention to as good an advantage "as he employed it, or that the result should be pre- "cisely the same in degree. It must be the same

"in kind and affected by his mode of operation in "*substance*."

In *Blanchard* v. *Reeves*, 1 Fisher 103, Judge Greer said:

"The complainant's specification describes a ma- "chine which effects its results by a combination of "lateral and rotary motion to form a helical "course or track in the operation of the machine. "But is that the *essence of substance* of the inven- "tion, or is it merely an accident of that *particular* "*form* of the machine described. * * * A "change in the subordinate agents or devices af- "fecting the motions of the model and guide only "in *figure of their path* or the relative lines of "their movement, in no case changes the principle "essence, substance, or character of the machine. "We cannot shut our eyes to the fact that the de- "fendants have pirated the invention."

In *Howe* v. *Williams*, 2 Fisher 395, the case was one of a sewing machine feed, and his Honor, Judge Cliford, said:

"The table and the side of the shuttle box when "employed as holding surfaces, are equivalent de- "vices, as it is quite obvious that the difference is "merely a formal one resulting from the substitu- "tion of a horizontal for a vertical position."

In *Sickles* v. *Borden*, 3 Blatch., 535, Judge Nelson said:

"The mere form of the defendant's machinery "must be disregarded, and the substance of its ar- "rangement, and its method of working must be "looked into for the purpose of seeing whether the "plaintiff's ideas are incorporated into it."

"If the plaintiff's invention be a machine, it is "infringed by a machine which incorporates in its "structure and operation, the substance of the in- "vention, that is *an arrangement which performs*

"*the same service or produces the same effect in the* "*same way or substantially the same way.*

In *Leavitt* v. *Higgins*, 1 Fish, 537, Judge Nelson said :

"In order to constitute an infringement, it is not "necessary that the arrangement and combination "of the party charged with the infringement should "be the same to the eye, *but in point of fact*. If "they embody the ideas of the patentee and the "machinery of the defendants operates by such "adoption and appropriation, then, though the ar- "rangement may be apparently different in reality, "and in judgment of law, an infringement exists."

In *Union Paper Bag Co.* v. *Nixon*, 6 Fish. 402, 1873, Judge Emmons said :

"The third claim is for a combination of adjust- "able forming rollers, with a creasing pulley, or "pulleys, (Potter patent, May 6th, 1863). The de- "fendants, in their industrious changes, in order to "avail themselves of this feature of adjustability, "have successively adopteddifferent forms of creas- "ing apparatus in connection with the guides and "formers. We think them all infringements. The "last resort, and that most earnestly defended, "is two rounded bars, or hooks, suspended from a "frame and adjusted with a slot and screw, by com- "ing in contact with the paper at the same point, "and having, in all respects, the same relations to "the residue of the motion. They perform, in the "same way, the function of the creasing rollers. The "only important difference we are able to glean from "the defendant's arguments is, that the friction from "the bent bar is greater than from the rollers. But, "it would be a blemish upon the law, which pro- "fesses to protect useful improvements, if such sub- "stitutes, capable of selection by persons of ordinary "intelligence, are not deemed invasions of an in- "ventor's rights."

In *Many* v. *Sizer*, 1 Fisher, 17, Judge SPRAGUE said: "In the plaintiff's specification, the arrange-"ment of the plates are described as *parallel*, or "nearly so, and the summing up states them to be "one convex outward and the other inward. And "it is insisted by the defendants that the plaintiffs "are *confined* to that arrangement. But I feel "bound to instruct you that such is not the law, "and that the plaintiff is not restricted to plates "that are curved and convex in the same direction, "but that this patent may cover plates both curved "inward or both curved outward, as well as those "which are parallel, or nearly so."

In *Boville* v. *Moore*, Davies' Patent, c. 402, CHIEF JUSTICE GIBBS said: "I remember that was the ex-"pedient used by a man in Cornwall who endeav-"ored to pirate the steam engine. He produced "an engine which, on the first view of it, had not "the least resemblance to Boulton and Watts' "engine; where you looked for the head you "found the feet, and where you looked for the feet "you found the head; but it turned out that he "had taken the principle of Boulton and Watts: "it acted as well one way as the other. But if you "set it *upright*, it was exactly Boulton and Watts' "engine."

These cases entirely settled the proposition that where two machines act in substantially the same way, however different in form they may be, they are substantially alike.

(*b*) But it is further contended that the Werner machine is not an infringement, on the ground it was not known at the date of complainant's patent as a proper substitute for the corresponding device in the King machine, and therefore that there is no infringement.

The courts have undoubtedly and properly held that, "a combination is not infringed, unless by a "machine, containing all the material ingredients

"patented, or proper substitutes for one or more "such ingredients well known to be such at the "time when the patent was granted."

Seymour v. *Osborn*, 11 Wallace, 516.

By this view we submit, is not meant that the ingredient substituted by the infringer must be well known as a substitute for the ingredient or element of the patentee *in such a combination* as the patentees; if that were the case, the patentee would not have made any invention, having merely modified an old combination. But it does mean that the ingredient or element substituted by the alleged infringer for the omitted ingredients or element of the patented combination, must be of such a kind, that it was known in mechanics, *in other relations*, as a proper substitute for the corresponding element of the patented machine; or that it must be such a change from the form of the patented machine as may be considered a change in *form* merely.

It has been held that "a change in form, proportions or degree is not such an invention as will "sustain a patent."

Smith v. *Nichols*, 21 Wallace, 112.

It is equally true that changes in form, proportions or degree will not enable one to escape the charge of infringement.

Roberts v. *Ryer*, 1 Otto 150.

And this would be manifestly the case though the changes in form, proportion or degree had not been used at the date of the original patent. This is abundantly shown by the cases above cited.

Winans v. *Denmead*, 15 Howard, 330.
Blanchard v. *Reeves*, 1 Fisher, 103.
Ives v. *Hamilton*, 10 Off. Gazette, 336.
Howe v. *Williams*, 2 Fisher, 395.

The device of defendant Werner, was one per-

fectly well known in other machines as a device suitable for producing crinkles or fullness in goods. Every user of a sewing machine has known for many years that when a portion of a fabric is to be gathered, that effect can be produced by the use of a strong pressure on the presser foot of the machine as the material is fed under it by the feed.

The device of Werner is nothing more than this common and well known contrivance applied as a substitute for King's device for doing the same thing.

(c) But it is further contended that Werner's device is patented, and this, it is said, is conclusive evidence that the two contrivances differ.

The allegation is that Werner's is an *improvement* on the King device, because it not only does what King's does, but it *also* gives to the fullness or crinkles a V shape, which is *supposed* to be somewhat more ornamental than the irregular wavy shape produced by King's guide, though an inspection of the two products *might well lead to an opposite conclusion*.

It is, however, well settled that though the defendant's device may be an improvement upon that of the plaintiff, and even be patented as such, that will not enable it to escape the charge of infringement.

"The fact that defendant has made improve-
"ments upon or additions to the invention patent-
"ed by plaintiff, gives him no right to use the
"plaintiff's invention."

Alden *v.* Dewey, 1 Story, 336.
Wordsworth *v.* Rogers, 3 Woodbury, and No. 155.
Foster *v.* More, 1 Curtiss, 279.
Parkhurst, *v.* Kinsman, 1 Blatch., 488.
American Paving Co. *v.* City of Elizabeth, 6 Fisher, 424.
Waterbury Brass Co. *v.* Miller, 5 Fisher, 48.

In *Kittle* v. *Frost*, 9 Blatch. 214, the court said: "It may be that the defendant's mattresses con-"tained a useful improvement beyond what is "found in Kittle's patent. Whether they do or "not is of no consequence here. They certainly "embody what is patented by Kettle."

In *Westinghouse* v. *Gardner*, 9 Off. Gaz. 538, the court said: "The defendant claims to be pro-"tected in the manufacture of its air break appa-"ratus by letters patent. * * * These devices "are claimed by defendant to be valuable improve-"ments on the apparatus of Westinghouse & Ine, "as was ably argued by defendant's counsel. And "while we are not disposed to dispute the ingenuity "and utility of these devices, and particularly the "defendant's apparatus for releasing the breaks, "and which may be, and no doubt is, a valuable "additional improvement, we are nevertheless "of opinion that the air-brake apparatus, as "constructed and used by defendant, although "embracing those alleged improvements, does in-"fringe the Westinghouse and Ine patents above "referred to, and that these improvements will not "justify the appropriation and use by the defend-"ants of that which has been patented to others."

To the same effect see numerous other cases.

Hartshorn *v.* Shorey, 9 Off. Gaz. 595.
Robertson *v.* Blake, 11 " " 877.
Murphy *v.* Kissling, 7 " " 303.
Batchelder *v.* Moulton, 7 Blatch., 303.

We are relieved to a large extent of any difficulty on this question of infringement by the admissions in Werner's patent for his machine (dated January 7, 1873.)

He shows there two devices for producing a greater fullness in the material. One is the presser foot or spring, which he calls in his patent a "detent or finger," and which holds the material back in the plane of its forward movement.

This is the device which he used. But he shows in his patent what he calls "a modified form." This form consists of a spring which presses *upward* from the plane of motion of the fabric, and which produces its effect in precisely the same manner, and is in form substantially, identical with King's device. The patentee expressly says, "the same effect (as that of his pressure spring actually used) can be produced by the modified form of detent shown in figure 4."

Werner, in his patent, therefore, considers the devices as substantially the same, and he can hardly complain if the Court so decided.

At one point in his examination he attempted to say that his machine did not produce "puffing." He says that he calls the material "trimming," when he says that there is a difference between it and puffing, (p. 142, q. 21, 22.) But, this want of frankness on his part is hardly in accordance with the claim of his own patent for his machine, which is expressly for,

"The detent D, arranged in combination with "the fluting rollers B, B, to produce the crinkles "or *puffing* on fabric, which is partially fluted as "set forth."

He also says, (p. 166, q. 8).)

"The pressure spring does not always produce a "uniform design. The configuration is more or "less regular. It also depends on the material, "whether finer or coarser, whether more or less "moist, or whether the machine is more or less "hot, and whether the spring press s more or less "on the material, and finally, whether the spring "is at a greater or less distance from the fluting "rollers."

But, it is alleged by the appellant's counsel, that the expert for the complainant "carefully ab- "stains from holding the Werner detent to be in any

"manner to be the equivalent of the arched guide" (p. 4). This is a great mistake. Mr. Kittle's evidence is unmistakable upon that point. After describing the action of the Werner spring and its platform, which together operate as a guide, and at the same time throw the required fullness into the material, he says (p. 35): "I cannot see that this "alteration or modification of the guide in the 'Exhibit Werner machine,' is substantially, or more "than a mechanical change; its purpose being the "same as the purpose of the guide in Exhibit 'reissue 3,000,' and its action being the same, to wit, to "receive and pass the goods to and into the rollers, "and at the same time take up the breadth of the "material at and opposite the plain zone, and between the fluting meshes. To be sure this acts to "bend the horizontal line or thread of the material "to a horizontal angle and so take up the breadth; "whereas, in the Exhibit 'reissue 3,000,' the guide "bends the material from a horizontal to a vertical, "arched on angular line. The simple fact of the "variation in the direction of the bend I do not "regard as a substantial difference."

Nothing could be clearer than this testimony. The fact that he does not happen to use the word "equivalent" is quite immaterial.

Quotations from Mr. Kittle's evidence, on pages 4 and 5, which are introduced to give the impression that he thinks the Werner device required invention to make do not fairly represent the witness. Reference to the text, (p. 57), will show that the witness was speaking of an entirely different matter from that alleged in the brief.

He had been asked whether or not puffing might not have been made by the use of fluting rollers *alone*, without the use of a guide, for throwing in increased fullness into the centre of the material, and by mere manual dexterity; and, in that connection, he said (p. 57, fol. 131), "I would

"say, however, that a person *with great care* "*and skill* might not produce between the fluting "rollers (without such guide) a single row or strip "of fluted puffing, bearing a close resemblance to "the puffing described in 'Exhibit reissue 3,001,' "of the length of a few inches, possibly a few feet "or yards. But I do distinctly state that it is my "opinion that it would be impracticable to produce "a fluted puffing in the manner, and as required in "the market, to the extent of a practical result in "manufacture, without the employment of some "analogous device in connection with an organized "machine for that purpose, substantially like 'Ex- "hibit reissue 3,000,' without inventing." It is this answer which was given in connection with the attempt of the defendant's counsel to show that a guide for giving fullness to material was useless, that in the brief is taken out of its connection, only *partially* quoted, and distorted to mean an entirely different thing.

On the whole case, it is clear that the Circuit Court was entirely right when it decided that the defendants' machine infringed, and remarked upon the similarity of the devices for throwing in the fullness between the plain portions of the rollers, as follows:

"The plaintiff shows how this is to be done by "an arched guide. This arch raises up the fabric, "the fabric rides over it, and so is pulled away "from the fluted parts of the rollers. The obstacle "interposed by the arched guide pushes up the "fabric to an apex. There would be no difference "in operation if the fabric were pushed down to a "given point by an arched guide. The defendant "interposes an obstacle which pulls back the fabric "from the fluted parts of the rollers. *The mode of* "*operation is the same as in the plaintiffs' ma-* "*chine, and the result is the same.* The only dif- "ference is that in the one the centre of the "extra width moves *upward*, as the pull is made.

"and in the other it does not, but in each the detent
" instrument diverts the fabric from what would
" otherwise be its course, so as thereby to pull out
" the extra width. I think the variation is merely
" mechanical and not substantial, and that the de-
" fendant's machine is an infringement.

" The detent and platform formed the two sur-
" faces of a guide between which the fabric pass-
" es; and these surfaces hold it so as to pull it
" away from the flutes. The two surfaces of the
" plaintiff's guide do the same thing."

It is clear, on the whole case, that the decree of the Circuit Court was correct, and it is respectfully submitted that it should be affirmed, with costs.

FREDERIC H. BETTS,
Counsel for Respondent.

Crimping and Fluting Machines.

No. 134,621. Patented Jan. 7, 1873.

Fig. 1.

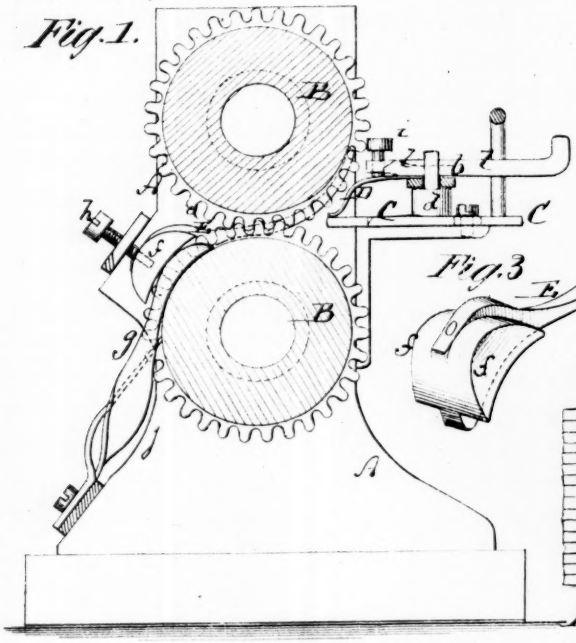


Fig. 3.

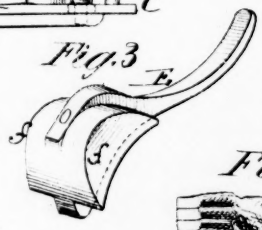


Fig. 4.

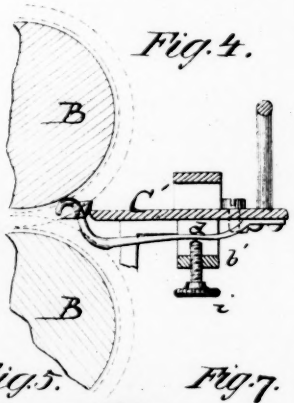


Fig. 5.

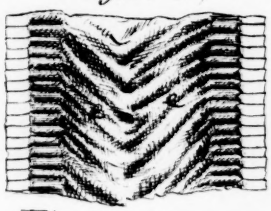
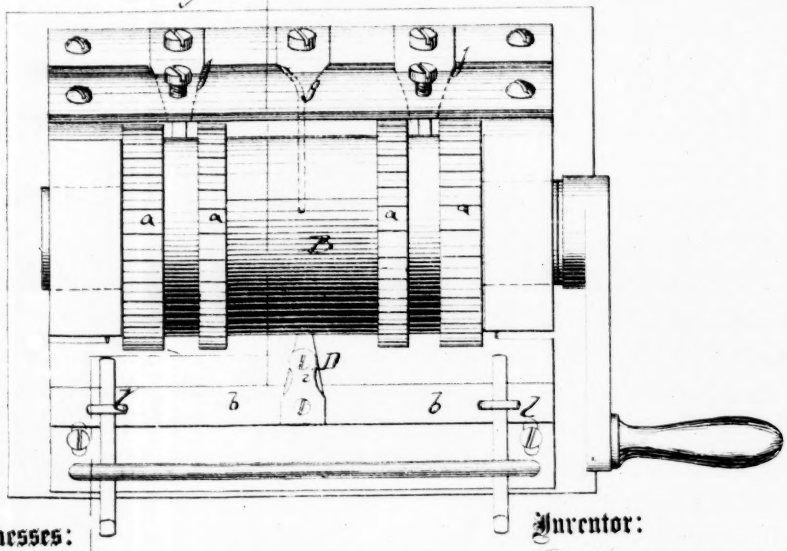


Fig. 7.

Fig. 6.

Fig. 2.



Witnesses:

John Becker

Sedgwick

Inventor:

R. Warner

Per Munn & Co

Attorneys.

UNITED STATES PATENT OFFICE.

ROBERT WERNER, OF HOBOKEN, NEW JERSEY.

IMPROVEMENT IN CRIMPING AND FLUTING MACHINES.

Specification forming part of Letters Patent No. **131,621**, dated January 7, 1873.

To all whom it may concern:

Be it known that I, ROBERT WERNER, of Hoboken, in the county of Hudson and State of New Jersey, have invented a new and Improved Combined Crimping and Fluting Machine, of which the following is a specification:

Figure 1 represents a vertical transverse section of my improved crimping and fluting machine, the line *c c*, Fig. 2, indicating the plane of section. Fig. 2 is a plan or top view of the same. Fig. 3 is a perspective view of the device for holding the fluting against the rollers. Fig. 4 is a vertical transverse section of a modification of my invention; Fig. 5, a face view of the crimping and fluting produced on the machine; Fig. 6, a transverse section; and Fig. 7, a longitudinal section of such fluting and crimping.

Similar letters of reference indicate corresponding parts.

This invention relates to a new machine for producing a fluted and crimped fabric, substantially like that for which a design patent was granted to me on the 29th day of November, 1870, from a smooth and flat woven fabric; and the invention consists, principally, in the application to fluting-rollers of a detent or finger by which a portion of the fabric is held back, and thereby formed into V-shaped, but more or less irregular, lateral waves or crinkles, whereby the stated and desired effect is produced. This finger is made to bear against a platform over which the fabric is passed to the fluting-rollers, or directly against one of the rollers, as may be desired. The invention also consists in a new arrangement and connection, with said fluting-rollers, of a device for holding the fluted fabric in contact with the same while the crinkled portion of the fabric is being elevated and puffed up by a projecting rib or stationary plate, all as hereinafter more fully described.

In the accompanying drawing, the letter A represents the frame of the machine. In the same are the bearings of two fluting-rollers, B B, which are parallel with each other, and, by preference, in a horizontal position, as indicated. The rollers B are provided with zones *a a* of fluting or toothed portions, which will cause certain strips of the fabric which pass between the said rollers to be fluted, while the remaining portions of the same fabric will not be fluted. C is a platform secured to the framework A in front of and about in line with the space between the two rollers. D is a detent or spring fastened to a bar, *b*, which rests, by posts *d*, upon the platform C. The free end of the spring D bears against said platform midway between the two inner zones or any pair of zones *a a* on said rollers. The fabric is passed over the platform C before it enters the rollers, or rather in its passage to the said rollers, and is consequently passed under and subjected to the pressure of the spring D, being fed or drawn forward by and between the rollers. That portion of the fabric which is subjected to the pressure of the spring D will be detained or held back or stretched back to be drawn into the V-shaped crinkles or crimping which is indicated in Fig. 5, at *e*. This effect, of course, can only be produced if the detent D bears upon the fabric previous to its being acted upon by the rollers, so that the portion affected by said spring can be drawn back by the detent in the manner shown. The same effect can be produced by the modified form of detent shown in Fig. 4, in which case the said detent is made to bear against one of the rollers B and fastened to the under side of a plate, C′. This modification can only be used when the detent bears against the rollers so far forward of the line that connects the two axes of the two rollers that sufficient material will be at the command of the detent to draw the fabric back into the V-shaped crimping; for, if the detent would apply to the middle of the roller when the fluting has already hold of the fabric, the drawing back could not be produced, inasmuch as the fluting would take up all the surplus fabric and none would be left for the effect by the detent. E E are metallic plates or bars provided with projecting cheeks *f*, which said cheeks bear against the fluted portions of the fabric as it emerges from between the two rollers, and hold said fluted portion in contact with the lower roller, while a projecting rib, *g*, moves the center of the crinkled portion from off said roller. This gives the transverse wave of the fabric which is indicated in Fig. 6. The plates or bars E E can, by set-screws *h h*, be adjusted nearer to or further away from the fluted portions of the rollers, for the purpose of holding the fluted portion of the fabric more or less firmly against the

rollers, and for flattening portions of the fluting between the zones *a*. The rollers may be made hollow to be heated by steam or otherwise, so that the fabric which is passed between them, preferably in a moist state, may retain the form into which it is put by the action of the machine. It will be found convenient to raise the detent D off the platform C, (or withdraw it from contact with the roller B, when placed as in Fig. 4,) in order to enter the end of the fabric between the rollers. With this object, the bar *b* is made detachable and locked by keys *l l*, (or the plate C′ made to be drawn back and forward.)

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The detent D arranged, in combination with the fluting-rollers B B, to produce the crinkles or puffing on the fabric which is partially fluted, as set forth.

2. The platform C or C′ arranged, in combination with the detent D and rollers B, as specified.

3. The cheek-pieces *f* in the plates E, applied, in conjunction with the projecting rib *g*, to the fluting-rollers B B, as specified.

ROBERT WERNER.

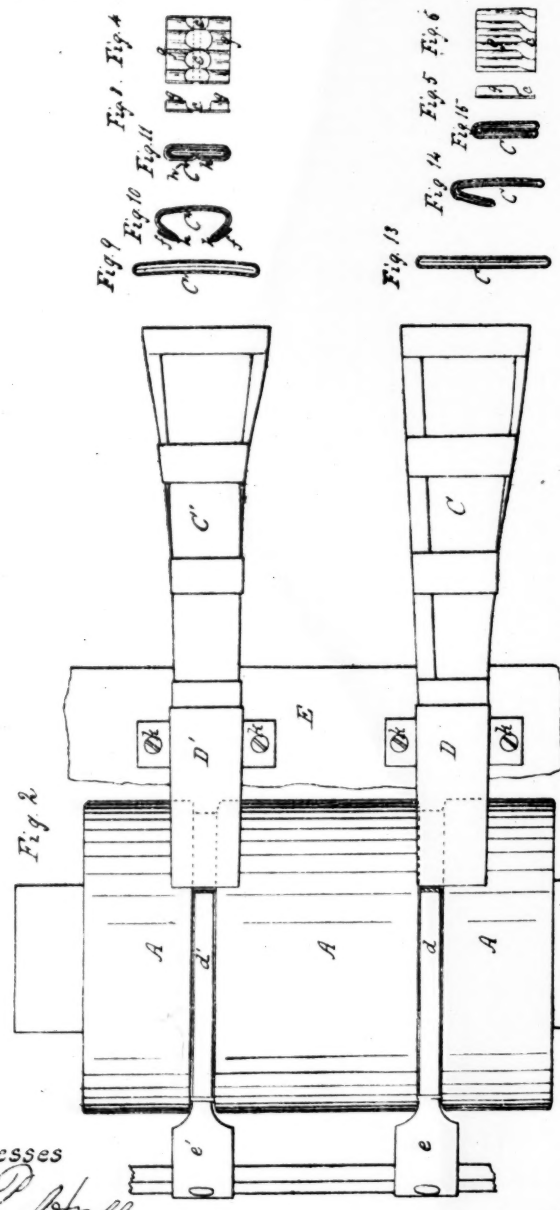
Witnesses:
A. V. BRIESEN,
T. B. MOSHER.

Sheet 2 2 Sheets

T. Robjohn.

Fluting Mach.

No. 42404 Patented Apr 19. 1864



Witnesses

Jas P Hall

Geo W Reed

Inventor

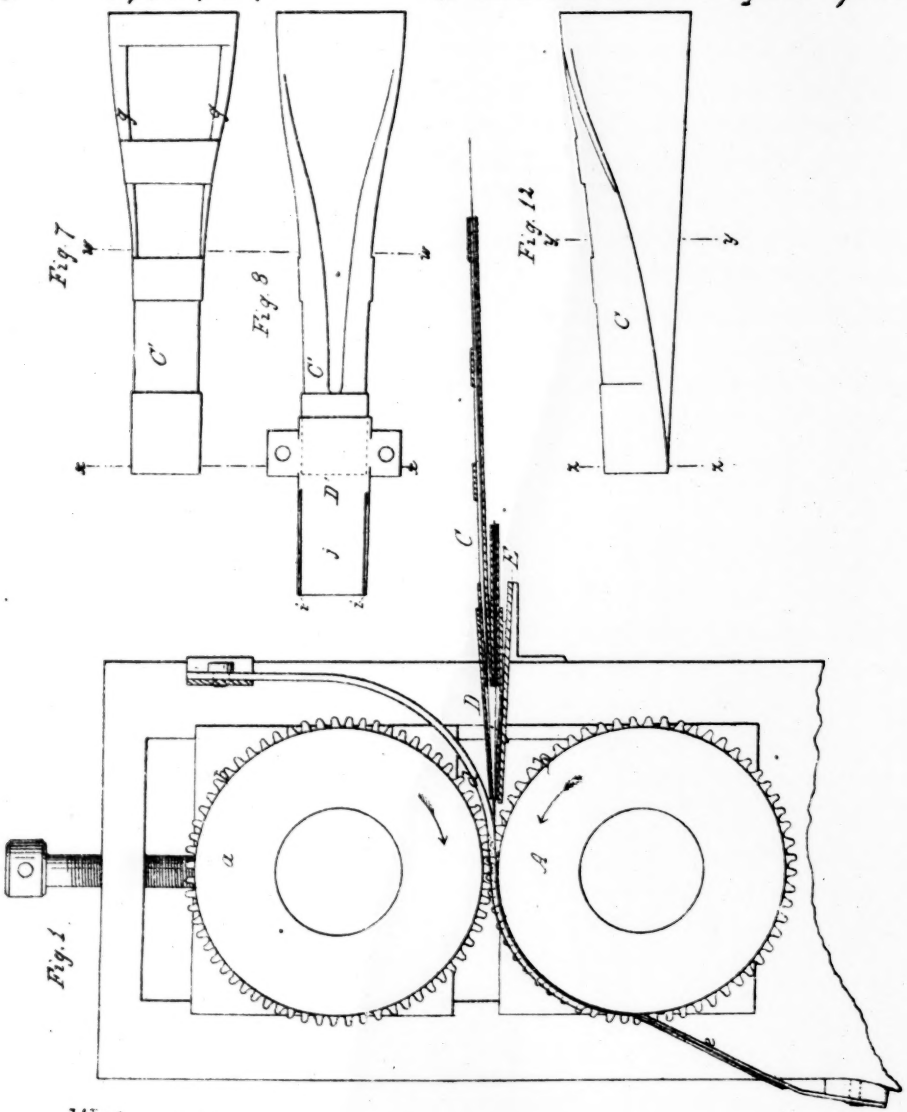
Thos Robjohn

Sheet 1 2 Sheets

I. Robjohn.

Fluting Mach.

No. 42404 Patented Apr. 19. 1864



Witnesses

Jas. P. Hall

Geo. W. Reed

Inventor

Thos. Robjohn

THOMAS ROBJOHN OF NEW YORK, N. Y.

LETTERS PATENT No. 42,404—Dated April 19th, 1864.

MAKING FLUTED RUFFLES.

To all whom it may concern:

Be it known that I Thomas Robjohn of the City, County and State of New York, have invented a new and useful improvement in Machinery for making Two-ply Fluted Ruffles; and I do hereby declare that the following is a full clear and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which Figure 1 is a vertical section of the principal parts of a fluting machine with my improvement. Figure 2 is a horizontal section of the same above the lower fluting roller. Figure 3 is a transverse section of one kind of ruffle to be made by the machine. Figure 4 is a back view of the same. Figure 5 is a transverse section of another kind of ruffle to be made by the machine. Figure 6 is a face view of the same. Figure 7 is a top view of the folding guide used in making the ruffle shown in Figs. 3 and 4. Figure 8 is a bottom view of the said guide and of the socket in which it is held. Figure 9 is an outer end view of the same. Figure 10 is a transverse section of the same in the line ww of Figs. 7 and 8. Figure 11 is a transverse section of the same in the line xx of Figs. 7 and 8. Figure 12 is a bottom view of the folding guide used in making the ruffle shown in Figs. 5 and 6. Figure 13 is an outer end view of the same. Figure 14 is a transverse section of the same in the line yy of Fig. 12. Figure 15 is a transverse section of the same in the line zz of Fig. 12.

Similar letters of reference indicate corresponding parts in the several Figures.

This invention consists in the combination with a fluting machine of a folding guide so applied as to fold and double a strip of muslin, silk or other fabric and deliver it in its folded state between the rollers that the doubling and fluting may be performed by a continuous process. It also consists in the combination with a fluting machine and folding guide of a flattening guide interposed between the said folding guide and the fluting rollers. It further consists in a folding guide of novel construction for doubling a strip of muslin, silk or other fabric by turning in both edges toward each other on the same side of the strip.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

A,a are a pair of fluting rollers arranged horizontally one above the other and having each two circumferential grooves vv' of a depth slightly greater than the depth of the flutes, the circumferential grooves of one being exactly opposite to those of the other and of a width equal to that intended for the flattened portion of the ruffle shown at cc in Figs. 4 and 6. These grooves receive the two pressers dd by which the flattening is produced, the said pressers being composed of elastic strips of metal attached to the upper part of the framing of the machine by a rigid bar B, and pressing on the bottoms of the grooves in the rollers. The grooves also receive the strippers ee by which the ruffles are stripped from the rollers in case of their adhesion thereto. These rollers, pressers and strippers do not differ essentially from those described in Re-issued Letters Patent No. 1556, but there are two sets of grooves in them and two pressers and two strippers are applied as they are intended for making two ruffles at once.

CC' are the folding guides applied one opposite to the grooves bb and the other opposite to the grooves bb' for folding the strips of which the ruffles are to be made and delivering them to the rollers under the pressers. These guides are held in place by being inserted into taper sockets DD which are secured by screws kk to a horizontal supporting plate E, which is secured to the framing of the machine in front of the rollers.

The guide C is constructed to fold the strip along the centre of its width as illustrated by the section Fig. 5, and its form may be readily understood by a comparison of Figs. 12, 13, 14, 15, the transverse section of the strip being shown

in red color in Figs. 13, 14, 15, which enables it to be seen how the folding is gradually produced by the drawing of the strip through the guide, effected by the fluting rollers. The guide is so arranged laterally with respect to the grooves bb of the fluting rollers that the two single edges of the folded strip will pass through the said grooves and the strip flattened at those edges, and the ruffle be formed with a single frill having a folded edge.

The guide C' is constructed to double the strip by turning in both edges toward each other on the same side of the strip as required to make the two-ply ruffle which is the subject of E. C. Woosters Letters Patent No 40,877. The entrance at one end of this guide is made in the form of a flat or nearly flat tube of a width equal to the width of the strip to be folded and to double the width of the ruffle. Commencing at a short distance from this end the upper side of this tube is open for a portion of its length having only a narrow rim ff on each side as shown in Figs. 7 and 10, and the sides of the guide are gradually turned under as shown at hh in Figs. 10 and 11, till it assumes at or near the other end the form shown in Fig. 11. The strip in being drawn by the fluting rollers through this guide has its two edges turned in toward each other on the under side as illustrated by the representation of the transverse section of the strip in red color in Figs. 10 and 11. Fig. 11 showing the strip in the form in which it emerges from the guide, and Fig. 10. showing the turning in and doubling about half completed. This guide is so arranged laterally in relation to the grooves d'd' of the fluting rollers as to deliver the doubled strip with the line in which its edges meet opposite to the centres of the said grooves, that the doubled strip may be flattened at the meeting of the edges and made with two fluted frills one on each side of the flattened portion c as shown at gg in Fig. 4. The two sides of this guide C' may be turned in equally to bring the meeting of the edges of the doubled strip in the centre thereof, or at any distance from the two folded edges, according as the two frills of the ruffle are desired to be of the same or of different widths.

The sockets DD' into which the folding guides are inserted and by which the said guides are held in place have their outer ends made of a form to correspond with the portions of the guides whence the folded strips issue, and the said sockets have their inner ends which are very nearly close to the rollers of the same form and construction as the guides which form the subject matter of the 4th clause of the claim of Re-issued Letters Patent No. 1556, hereinbefore referred to, that is to say, they are flattened and constructed with slits ii and tongues j to press and flatten the doubled strips as they pass from the folding guides to the rollers. The slits ii and tongues are here represented as arranged on the under side of the tube instead of on the upper side as described in the Letters Patent hereinabove referred to.

What I claim as my invention and desire to secure by Letters Patent is,

FIRST:—The combination with a fluting machine of a folding guide constructed and arranged to deliver a strip of muslin or other fabric to the fluting rollers and to fold and double the said strip as it is drawn through it by the said rollers substantially as and for the purpose herein specified.

SECOND:—The combination with the fluting machine and the folding guide of an interposed pressing guide substantially as herein specified.

THIRD:—Forming the said interposed pressing guide as part of a socket which receives and holds in place the folding guide substantially as herein specified.

FOURTH:—The combination with a fluting machine of the folding guide C' constructed to turn in the two edges of a strip of muslin or other material toward each other on the same side of the strip, substantially as herein specified.

THOS. ROBJOHN.

Witnesses:
JAS. P. HALL.
GEO. W. REED.

R. Werner. Design for Dress Trimmings.

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PATENTED NOV 29 1870

Fig 1.

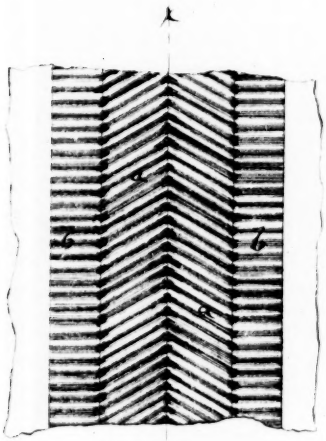

Fig. 2.

Witnesses:

G. S. Ashton

Alex. F. Roberts

Inventor:

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UNITED STATES PATENT OFFICE.

ROBERT WERNER, OF HOBOKEN, NEW JERSEY.

DESIGN FOR DRESS-TRIMMINGS.

Specification forming part of Design No. **4,500**, dated November 29, 1870.

To all whom it may concern:

Be it known that I, ROBERT WERNER, of Hoboken, in the county of Hudson and State of New Jersey, have invented a new and original Design for Dress-Trimmings; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 represents a face view of my design. Fig. 2 is a longitudinal section of the same, taken on the plane of the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to a new design for ruffled trimmings.

I make the middle row *a* of ruffles or folds, V-shaped, with greater or lesser regularity, as indicated in Fig. 1.

The border folds *b b* are lateral, as shown.

The trimmings may be single, as shown, or may have a series of rows, *a*, separated from each other by rows *b*, and may be of suitable color or colors.

I claim as my invention—

The central ruffles V, border ruffles *b b*, and trimmings *a*, combined, to form a design for ruffled trimmings.

ROBERT WERNER.

Witnesses:
A. v. BRIESEN,
GEO. W. MABEE.